Fire Weather Operating Plan
For
Mississippi

2015

1/2015

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I Introduction

This operating plan will be a semi-permanent state plan specifying services provided by the National Weather Service Offices in Mississippi. This plan incorporates procedures detailed in the Interagency Agreement of Meteorological Services. The National Weather Service offices that service portions of Mississippi will provide fire weather services for state and federal agencies and other public land management institutions for the state. The services will consist of fire weather products and support as outlined in the National Agreement for Meteorological Services, which was signed by the Departments of Commerce, Agriculture, and Interior.

The National Weather Service (NWS) will compose standard products, including fire weather planning forecasts, fire weather watches, fire matrix forecasts, red flag warnings, NFDRS forecasts, fire weather notification messages, fire danger statements, and hazardous weather outlooks in relation to fire weather. Fire weather. training and other assistance will be provided to cooperating agencies by the NWS when meteorologists are available. Agencies served will provide the NWS needed weather observations suitable for forecasting and verification purposes as needed. Land management agencies will provide fuel and fire behavior training necessary for forecasters to understand needs of foresters and others that extinguish forest fires.

This plan describes the fire weather services that will be provided by the National Weather Service (NWS) offices in Jackson, Mississippi, Memphis, Tennessee, New Orleans, Louisiana, and Mobile, Alabama to customers in the state of Mississippi.

Due to the continuing changes, this operating plan is a living document, and parts of it may need to be updated. In the event this is necessary, affected agencies will be notified and addendums will be made. Important changes and clarifications of these fire weather services, including both general and specific information, will be listed in this introductory section in the annual update.

Due to the variance of terrain, climate, fuels, seasons, land management agencies, and personnel, user requirements and NWS products will vary from office to office. NWS personnel will ascertain and support local customers' requirements and keep customers informed of developments in service and product support.

At each NWS office the fire weather season is largely determined by the user agencies based on precedent weather conditions and climate. A fire season begins at an NWS office when user agencies request either routine service or service for extensive prescribed burning operations or on the date agreed upon during the preseason conference(s). The fire season ends when the requesting agencies indicate NWS forecasts are no longer needed.

In some areas, the fire weather season may be year-round. In others, there may be two fire weather "seasons" - one during the spring and another during the fall, with a "green" season between the two during which fire weather services are not usually needed.

Criteria for issuance, frequency of issuance, content, format, dissemination, etc for each fire weather product will be reviewed annually.

Purpose and General Information

This Operating Plan serves as the official document governing interaction and relationships between the National Weather Service offices that serve the federal, state and local land management agencies that rely on weather support in Mississippi. Relationship between the AOP and Interagency Agreement. This Operating Plan is issued in lieu of a formal Memorandum of Understanding (MOU) between the National Weather Service, USDA Forest Service, Fish and Wildlife Service, NPS, MFC ,and other land management agencies that rely on fire weather support. The plan will also outline fire weather forecast operations and services available to customers. This includes products and formats, dissemination and coordination as well as customer input. The services will consist of fire weather products and support as outlined in the National Agreement for Meteorological Services, which was signed by the Departments of Commerce, Agriculture, and Interior.

This Operating Plan will be the governing document for fire weather procedures and cooperation among the following agencies:

A. USDA Forest Service – Holly Springs Nat'l Forest, Tombigbee Nat'l Forest, Delta Nat'l Forest, Bienville Nat'l Forest, Desoto Nat'l Forest, and Hommochitto Nat'l Forest.
B. Mississippi Forestry Commission(MFC)
C. U.S. Fish and Wildlife Service
D. National Park Service-Natchez Trace Parkway

II Services Area and Organization Directory

A. Description of area served:

This plan serves the state of Mississippi. NWS offices that will offer support are Memphis, Jackson, New Orleans, and Mobile.

B. List of Weather Offices and Points of Contact

NWS Southern Region, Tx

For request and information Ph: 817-978-1100 ext 116

Paul Witsaman FWPM paul.witsaman@noaa.gov

FWPM - Fire Weather Program Leader
MIC - Meteorologist in charge
FWPM - Fire Weather Program Manager

NWS OFFICE MEMPHIS, TN (MEG) 7777 Walnut Grove Road OM1
Memphis, TN 38120

Weather Forecasts and spot forecast requests.....
901-544-0405

FAX		901-544-8705
John Sirmon	Focal Point	john.sirmon@noaa.gov
Jim Belles	MIC	jim.belles@noaa.gov

NWS OFFICE JACKSON, MS (JAN) 234 Weather Service Dr.
Jackson, MS 39208

Weather Forecasts and spot forecast requests.....
601-936-2189

FAX		601-965-4028
Marc Mcallister	Focal Point	marc.mcallister@noaa.gov
Alan Gerard	MIC	alan.gerard@noaa.goaa.gov

NWS OFFICE NEW ORLEANS, LA (NEW) 62300 Airport Road
New Orleans, LA 70460-5243

Weather Forecasts and spot forecast requests.....
985-645-0565
FAX 985-649-2907

Tim Destri	Focal Point	tim.destri@noaa.gov
Kenneth Graham	MIC	Kenneth.Graham@noaa.gov

NWS MOBILE, AL (MOB) 8400 Airport Blvd Bldg 11.
Mobile, AL 36608

Weather forecasts and spot forecast requests..... 251-633-6443
FAX 251-607-9773

John Purdy	Focal Point	john.purdy@noaa.gov
Jeffrey Medlin	MIC	jeffrey.medlin@noaa.gov

C. List of Agencies Participating... State and Federal

Points of contact in Mississippi for fire weather:

Name	Location	Phone	Fax/Contact point
MS Interagency Coordination Center	Pearl MS	601-420-6005	601-420-6003
Email: miccdispatch@gmail.com			
US Forest Service Danny Bryant	Jackson MS	601-965-1668	601-965-5519
Email: dannybryant@fs.fed.us (FMO)			
MFC Dennis Deuterive :	Jackson MS	601-420-6001	601-420-6003
Email: ddauterive@mfc.state.ms.us (State Fire Boss)			

Additional points listed for each WFO:

WFO Memphis Points of Contact:

Name	Location	Phone	Fax/Contact point
Holly Springs National Forest	Holly Springs	662-236-6550	
Tombigbee National Forest	Ackerman	601-285-3264	

WFO Jackson Points of Contact:

Name	Location	Phone	Fax/Contact point

Charlie Morgan (State Forester)	Jackson ,MS	601-359-2800	601-420-6003
Shawn Nagle (Natchez Trace FMO)	Tupelo, MS	662-680-4040	662-680-5288

WFO Mobile Points of Contact:

Name	Location	Phone	Fax/Contact point
USFS De Soto Ranger District Office	Wiggins, MS	601-928-4422	601-528-6193

WFO New Orleans Points of Contact:

Name	Location	Phone	Fax/Contact point
Southeast Louisiana Wildlife Refuges	Slidell, LA	504-646-7555	504-646-7588
Sandhill Crane and Grand Bay Refuge	Gautier, MS	228-497-5780 ext. 22	228-497-9612
USFS De Soto Ranger District Office	Wiggins, MS	601-928-4422	601-528-6193
Homochitto National Forest	Meadville, MS	601-384-2814	**601-384-5130**

III Services Provided by the National Weather Service:

A.. Basic fire weather products: Routine

Fire Weather Forecast:

The Fire Weather Forecast is designed to provide land management personnel weather input to be used for decision-making related to fire pre-suppression activities and other planning throughout the year. For issuance times see individual weather offices listed below. This product will be updated as needed or whenever a Fire Weather Watch or a Red Flag Warning is issued.

Distribution:
This product is distributed to land management and fire weather agencies over the internet.

Internet sites:

WFO Memphis, TN……..http://www.srh.noaa.gov/meg/?n=fireweather
WFO Jackson, MS.....http://www.srh.noaa.gov/jan/?n=fire_weather
WFO New Orleans, LA.....http://www.srh.noaa.gov/lix/?n=fire_wx
WFO Mobile, AL.....http://www.srh.noaa.gov/mob/?n=fire

General

The following elements will be included in the Fire Weather Forecast products issued.

A. Headlines: A headline is used when Red Flag Warnings and/or Fire Weather Watches are in effect. The headline will include the warning type, location, and effective time period. The location will be described in terms of geographic or other easily identified markers, such as cities, towns, rivers, or highways. The headline for a warning and/or watch will also be included in each appropriate zone grouping. Significant trends of locally-defined critical weather elements are headlined for non-watch or non-warning periods.

B. Discussion: The discussion is a brief, clear, non-technical description of weather patterns that will influence the weather in the forecast area. The emphasis is the first two days of the forecast period. Locally-defined critical weather elements will be included, such as fog development.

C. UGC FIPS Coding and Geographic descriptors: The FWF format (Z) of the Universal Generic Code (UGC) is used to identify each specific forecast zone within an FWF segment.

D. Forecast Period: The fire weather forecast product will have a minimum of three 12-hour time periods in the morning forecast, and four 12-hour time periods in the afternoon forecast. At the end of each time period, locally-established weather elements are inserted at request of customers. Both issuances will have a general outlook out to seven days. In the general outlook section, a forecast period is a 24-hour block of time, beginning at midnight and ending at midnight the next day.

E. Sky/Weather/PoP: Sky cover, weather descriptors, and probability of precipitation should follow the same guidelines as those used in the Public Forecast such as Clear, Partly Cloudy, Cloudy, as examples .

F. Maximum and Minimum Temperatures: Afternoon temperatures will be based on the maximum value expected. The morning temperature is based on the lowest expected overnight temperature. NWS Jackson uses temperature trends for the first two forecast periods.

G. Maximum and Minimum relative humidity and a 24-hour:
Minimum relative humidity is forecast during the daytime and the maximum relative humidity during the nighttime. The range of the RH forecasts is usually 5 percent. NWS Jackson uses relative humidity trends for the first two periods.

H. Wind: The general true direction and speed of the wind for each time period. Maximum gusts, erratic winds, and wind shifts should be mentioned when expected. The description of the wind should be indicated (i.e., 20-foot level,10-minute average, etc.). The 16-point compass should be used for the wind direction.

I. Extended Period Days 3 through 7..
Elements in the state NWS Offices extended forecast period will be from days 3 to 7 The period may include any or all of the mandatory day short term forecast elements: Significant winds, pops, and rhs, as established by local customers,

are included in the 3- to 7-day forecast. NWS offices of Mobile and New Orleans uses minimum relative humidity in their extended forecast.

J. Optional Elements: These are dependent on local user requirements. Examples of user-requested optional elements include; transport winds, mixing height, mixing height layer (NWS MEG),lal, category day, 500 m mixing height temp,500 m transport wind, 500m mixing height, dispersion index, stagnation index, las1, and stability.

WFO Specific

WFO Memphis, Tennessee:

Fire Weather Forecast (product identifier MEMFWFMEG; WMO Header FNUS54 KMEG):
Fire weather forecasts from the Memphis NWS office are issued twice a day, early in the morning. and the latter in the afternoon by 4 pm. In addition to the required forecast parameters and information on any fire weather watches and red flag warnings in effect, the routine fire weather forecast offers additional parameters, including precipitation duration, precipitation timing, average maximum air temperature and 24 hour trends, average maximum relative humidity and 24 hour trends, average wind direction and range of wind speed at 20 feet Mixing height(ft and m)(agl and msl), transport wind direction and speed (m/s and mph), ventilation index (m2/s), Category day, 500 meter mixing height temperature, 500 meter transport wind direction and speed (m/s and mph), dispersion index, lightning activity level(LAL), lower atmospheric stability index(LASI), Arkansas stability index, and Mississippi stagnation index. Example see **Appendix VI**.

Forecasts will be updated when changes in the meteorological conditions do not reflect the forecast.

WFO Jackson, Mississippi:

Fire Weather Forecast (product identifier JANFWFJAN; WMO Header FNUS54 KJAN): Fire weather forecasts from the Jackson NWS office will be issued twice a day. The first issuance will be early in the morning by 8 am and the latter in the afternoon by 4 pm, with updates issued as needed In addition to the required forecast parameters and information on any fire weather watches and red flag warnings in effect, the routine fire weather forecast offers additional parameters, including precipitation amount, precipitation timing and duration, wind shifts, mixing height and transport winds in both english and meters, stagnation index, with expanded parameters of category day, vent index, vlori maximum and dispersion index. Example see **Appendix VI**.

This product is updated for the following reasons.
1. Changes in the stagnation index.
2. Sudden increases or decreases in moisture over the region...especially during very dry high fire danger conditions.
3. During very dry periods when heavy rains are on the horizon. The update will entail changing rainfall duration and adding the rainfall amounts.
4. If a strong cold front approaches the area with gusty winds that will affect transport winds and mixing heights.

If the Fire Weather Forecast issued by WFO Jackson, MS, has not been received by 8:15 a.m., then the forecast will be faxed to the Mississippi Interagency Coordination Center in Pearl, Mississippi. Contact phone 601-420-6005, fax 318-420-6003. This forecast will then be forwarded to the appropriate forestry agencies.

WFO Mobile, Alabama:

Fire Weather Forecast (product identifier BHMFWFMOB; WMO Header FNUS54 KMOB): Fire Weather Planning Forecasts from the Mobile NWS office are issued twice a day. The first issuance is in the morning by 5:30 am and the latter is in the afternoon by 2:30 pm. In addition to the required forecast parameters and information on any fire weather watches and red flag warnings in effect, the routine Fire Weather Planning Forecast offers additional parameters, including precipitation amount, precipitation timing and duration, mixing heights (feet/meters AGL), mean transport wind speed (mph, m/s) and direction in the mixing layer, dispersion index, stagnation index. stability class, maximum Ivori, and Ial (lightning activity level). Example see **Appendix VI.**

Forecasts will be updated when changes in the meteorological conditions do not reflect the forecast.

WFO New Orleans, Louisiana:

Fire Weather Forecast (product identifier NEWFWFLIX; WMO Header FNUS54 KNEW):
Fire weather forecasts from the New Orleans NWS office are issued twice a day, early in the morning by 5 am and the latter in the afternoon by 4 pm. In addition to the required forecast parameters and information on any fire weather watches and red flag warnings in effect, the routine fire weather forecast offers additional parameters,including max/min temperatures, cloud cover, precip amounts/chances/duration/ type,min/max humidity,mixing heights (meters AGL/MSL), transport wind speed (meters/second), and direction in the mixing layer, ventilation index, SILT/500 MLT, stagnation index, stability class, category day,and dispersion index.. Additional parameters will be added as needed. Example see **Appendix VI**.

Forecasts will be updated when changes in the meteorological conditions do not reflect the forecast.

IV NFDRS Forecasts:

This product measures wildfire danger at RAW Sites. NFDRS observations are taken once per day.NFDRS forecasts are not intended to be site specific...but an overview of the general fire danger. Effective fire suppression planning depends heavily on NFDRS because it is an objective tool for predicting the difficulty of suppression of a wild fire. The NWS role in NFDRS is forecasting weather input which, combined with customer input, allows NFDRS software to predict the next day's fire danger indices. Daily weather observations entered into NFDRS by the fire agencies form the basis of the forecast input by the NWS. Each NFDRS site is located at a spot which is representative of the terrain and fuel types dominant in that area.

Format for NFDRS forecast…

FCST,226102,030514,13,2,83,65,1,3,S,11,M,83,68,100,65,0,0,N

1. FCST...Forecast Point
2. 226102...NFDRS Station ID(22...State 61...County 02 Station ID)
3. 030514...Tomorrow's Forecast Date
4 13...Local LST for Tomorrow's Forecast (always 1300)
5. 2...Weather valid at 1300 LST Tomorrow...0 (Clear) 1 (Scattered Clouds) 2 (Broken Clouds) 3 (Overcast Clouds) 4 Foggy 5 (Drizzle) 6 (Raining) 7 (Snowing) 8 (Showers at or near Station) 9 (Thunderstorms)
6. 83...Current Temp at 1300
7. 65...Current Relative Humidity at 1300
8. 1...LAL1 Lightning Activity Level from 1400 to 2300 LST
9. 3...LAL2 Lightning Activity Level from 2300 to 2300 LST (1 none...2 isolated...3 few...4 scattered...5 numerous...6 which is high based storms out west)...which we will not deal with in the south.)
10. S,11...Wind...Windspeed valid at 1300 LSt
11. M...Missing 10 hr Time lag fuel moisture(always missing)
12. 83...Maximum Temperature for Tomorrow
13. 68...Minimum Temperature for Tomorrow
14. 100...Maximum Humidity for Tomorrow
15. 65...Minimum Humidity for Tomorrow
16. 0....Precipitation Average Duration from 1400 to 0500 LST
17. 0....Precipitation Average Duration from 2300 to 2300 LST
18. N....Y or N...This indicates whether liquid water will be on the fuels at 1300 LST.
Use with CAUTION- a Y will reset all the indices to zero. We will keep the value at N in our product for all stations.

WFO Specific

WFO Memphis

Fire Weather Forecast (product identifier MEMFWMMEG; WMO Header FNUS84 KMEG):
NFDRS forecasts from the Memphis NWS office are issued once a day, in the afternoon by 4 pm.

WFO Memphis has the following sites in their NFDRS forecast.

A. Winborn Station in Marshall County. NFDRS Site: 220202
B Monroe Station in Monroe County. NFDRS Site: 222401
C. Tishomingo Station in Tishomingo County: NFDRS Site: 220601
D. Yallabusha Station in Yalobusha County. NFDRS Site: 222101

Example see **Appendix VII**.

Forecasts will be updated when changes in the meteorological conditions do not reflect the forecast.

WFO Jackson

Fire Weather Forecast (product identifier JANFWMJAN; WMO Header FNUS84 KJAN):
NFDRS forecasts from the Jackson NWS office are issued once a day, in the afternoon by 4 pm.

WFO Jackson has the following sites in their NFDRS forecast.

A. Bude Station in Franklin County. NFDRS Site: 226102
B Copiah Station in Copiah County. NFDRS Site: 225502
C. Delta Station in Sharkey County: NFDRS Site: 223301
D. Ridgeland Station in Madison County. NFDRS Site: 224403
E. Marion Station in Marion County. NFDRS Site: 227202
F. Bienville Station in Scott County: NFDRS Site: 225101
G. Noxubee NWR Station in Noxubee County: NFDRS Site: 224101
H. Covington Station in Covnington County. NFDRS Site: 226502
I. Holmes Station in Holmes County. NFDRS Site: 223501
J. Warren Station in Warren County. NFDRS Site: 224201
K. Lauderdale Station in Lauderdale County. NFDRS Site: 225301
L. Neshoba Station in Neshoba County. NFDRS Site: 224601
M. Ragland Hills Station in Forest County NFDRS Site 227401

Example see **Appendix VII**.

Forecasts will be updated when changes in the meteorological conditions do not reflect the forecast.

WFO New Orleans

Fire Weather Forecast (product identifier NEWFWMSIL; WMO Header FNUS84 KLIX):
NFDRS forecasts from the New Orleans NWS office are issued once a day, in the afternoon by 4 pm.

WFO New Orleans has the following sites in their NFDRS forecast.

A. Hancock Station in Hancock County. NFDRS Site: 228002
B Sandhill Crane Station in Jackson County. NFDRS Site: 222401

C. Camp Keller Station in Harrison County: NFDRS Site: 228290
D. Grand Bay Station in Jackson County. NFDRS Site: 227001

Example see **Appendix VI**.

Forecasts will be updated when changes in the meteorological conditions do not reflect the forecast.

WFO Mobile

Fire Weather Forecast (product identifier BHMFWMMOB; WMO Header FNUS84 KMOB):
NFDRS forecasts from the Mobile NWS office are issued once a day, in the afternoon by 4 pm.

WFO Mobile has the following sites in their NFDRS forecast.

A. Wausau Station in Wayne County - NFDRS Site: 226702
B Black Creek Station in Stone County - NFDRS Site: 227802
C. Greene Station in Greene County - NFDRS Site: 227601

Example see **Appendix VI**.

Forecasts will be updated when changes in the meteorological conditions do not reflect the forecast.

V. Zone Fire Weather Matrix Forecasts:
WFO Specific

WFO Jackson

Fire Weather Matrix Forecast (product identifier JANAFWJAN; WMO Header FNUS54 KJAN):
NFDRS forecasts from the Jackson NWS office are issued twice a day, early in the morning by 8 am and in the afternoon by 4 pm. The product gives two hourly forecast for the following items through 36 hours for all over our Central Mississippi Counties.:

The Central Mississippi counties covered by WFO JAN Fire Matrix Forecast include:
Adams, Attala, Bolivar, Carroll, Choctaw, Claiborne, Clay, Copiah, Covington, Franklin, Forrest Grenada, Hinds, Holmes, Humphreys, Issaquena, Jasper, Jefferson,Jefferson Davis Jones, Kemper, Lamar, Lauderdale, Lawrence, Leake, Leflore, Lowndes, Madison, Marion, Neshoba, Newton, Oktibbeha, Rankin, Scott, Simpson, Sharkey, Sunflower, Warren, Washington, Webster, and Winston

The product has the following parameters: the routine fire matrix forecast offers additional parameters, including precipitation amount, precipitation timing and duration, mixing height and transport winds in both english and meters, with expanded parameters of vlori maximum and fwdi(fire weather danger index). Fire Weather Danger Index(fwdi) goes from 1 low to 5 extreme. It is the potential for fire starts and the amount of suppression required. Example see **Appendix VIII**.

VI. Spot Forecasts:

Spot forecasts are site-specific forecasts for wildfires, prescribed burns, search and rescue operations, aerial spraying, etc. By being site-specific, these forecasts take into account the effects of topography, vegetation and any nearby bodies of water. The specific contents, issuance frequency, means of communication, and other details of issuance will be determined by the local customers and NWS personnel at the time of the user's initial request for Spot Service. The general policy of providing Spot forecasts is established by the local NWS offices and local customers.

Spot forecasts will include specific weather information taking into account the various factors in the incident area, including sky condition, precipitation, and thunderstorm probability, specific maximum and minimum temperature and humidity, and wind speed and direction for the specific area.

Spot forecasts will be issued on request to any government or private agency for a wildfire. Requests for spot forecasts for non-wildfire purposes will only be honored from federal agencies, from non-federal agencies operating with a federal agency on an interagency agreement or from any non-federal government agency when public safety is at risk. Spot forecasts will typically cover three 12-hour periods (Today…Tonight and Tomorrow) with 1-2 hour intervals in the first period…which could extend into the 2nd period. Any forecast beyond day two will typically be an outlook.

Contents and General Information on Spot Forecast

A Spot Forecast will be headlined for a Red Flag Warning or Fire Weather Watch if one is in effect. The forecast will begin with a meteorological discussion, and will include any of the following information as designated by the requesting customer: temperature, relative humidity, wind direction speed and gust (20ft, 2min), cloud cover, weather phenomena, probability/type of precipitation, mixing height(ft/m), and transport wind (mph or m/s). Additional elements may be requested by the customer such as category day. top and bottom of mixing layer height,dewpoint, lvori, stability class and dispersion.

Spot forecasts are available upon request at any time of day, week or season. Consultation service is also available for
planning projects for which weather might be a factor. Requests for spot forecasts shall be serviced by at least one trained meteorologist. These requests will be completed as soon as possible and should typically take around 30 minutes
or less. However, protection agencies should be aware that other duties (such as severe weather) may take higher priority, and short delays may occur. User agencies should submit spot forecast requests by phone or fax to a NWS

office. If excessive delays are encountered, please notify the appropriate NWS office. **If the spot forecast is to support a wildfire, please inform the forecaster, or annotate the spot request form accordingly.**

NOTE: please call the respective NWS Offices before sending a request by fax or internet.

In situations when the internet is down. requesting agencies are encouraged to submit requests by faxing a partially completed Special Forecast Request Form D-1. Blank copies of WS Form D-1 may be obtained from any NWS office. Emergency requests may be submitted and fulfilled using the most efficient means possible. When listing the location, requests should contain both latitude/longitude coordinates and a local reference.

Procedure of Requesting a Spot Forecast

The requesting customer should go to the local NWS office internet home page, seek the fire weather web page, then select the procedure for requesting a spot forecast. The spot forecast request page is standardized, and prompts the customer for information about the location, elevation, and size of the fire as well as for observations and contact phone numbers. The location of the fire will then appear on a topographic map image,allowing both the requesting customer and the NWS forecaster to see its location. The customer may customize their request by highlighting which elements they need, and for which forecast periods. A remarks section allows the customer to ask for additional elements or time periods. In case of an internet outage, the customer may fax in a request, using form D-1. Customers are reminded to provide as fresh an observation as possible. The spot forecast will usually be issued within the hour of a request, depending on current weather and volume of spot forecasts. The completed spot forecast will be sent over the
internet, and will be available on the same web site used to request the forecast.

Criteria for Updating Spot Forecast:

1. A sudden, significant **wind shift:** any sustained wind of 10 knots or more, or frequent gusts of 20 knots or more, that shifts direction 40 degrees or more for a continuous duration of ½ hour or more.

2. Development of showers and thunderstorms not forecasted.

3. When minimum humidity drops below 30 percent not forecasted.

Note: **Spot forecasts should not be used as general planning tools** for the following day. "Planning" type forecast information should be obtained from the routine fire weather forecast and can be augmented by direct phone consultation with a forecaster on duty at the appropriate NWS office. Spot forecasts are intended to support ongoing or imminent wildfire or federal prescribed burn activity only.

Examples for each office see **Appendix VI**.

VII. Hazardous Weather Outlook

In times when wildfire activity or potential fire danger from dry conditions is expected to threaten lives or property , NWS offices are encouraged to issue Special Weather Statements under the heading of Hazardous Weather Outlook. The

decision of when to issue this product is left to the discretion of each forecaster as well local NWS office policies.

WFO Specific

WFO Jackson, Mississippi:

The Hazardous Weather Outlook (product identifier JANHWOJAN; WMO Header FLUS44 KJAN): are issued several times a day.

WFO Jackson uses a four level color coded system for showing potential threat of fire danger due to prolong dry conditions...esp with a Fire Weather Watch or Red Flag Warning in effect. The wording below can be adjusted to any particular fire weather conditions.

A. Extreme…..Very strong winds in excess of Red Flag Warning conditions combined with limited to moderate low humidity. Fires will spread quickly and spot fires are common. Fire control is difficult due to strong winds.

B. High…...Open burning should not be attempted. High winds and extreme dry periods lead to extreme burning conditions. Open fires can quickly escape and area very difficult to control, even for experience firefighters. Conditions can meet minimum conditions for Red Flag Warnings in most cases.

C. Elevated….Any open burning is discouraged due to increased wind and lower humidity...except by experience fire personnel. Increasing winds and lower humidity conditions contribute to drying fuels. Fires escapes control more easily
and containment is difficult for inexperienced fire personnel. Limited open burning is usually safe with proper containers and precautions under Limited fire danger conditions.

D. Limited...Open burning is usually safe with proper containers and precautions under Limited fire conditions.(same as above)

Forecast is updated when changes in the dry fire weather or meteorological conditions do not reflect the forecast.

WFO New Orleans, Louisiana:

The Hazardous Weather Outlook (product identifier NEWHWOLIX; WMO Header FLUS44 KLIX): are issued several times a day. WFO New Orleans does not have a standardized system of adding fire danger threats in this product, however, very low humidity (<25%), especially when combined with winds over 15 mph are highlighted.

Forecast is updated when changes in the dry fire weather or meteorological conditions do not reflect the forecast.

WFO Mobile, Alabama:

The Hazardous Weather Outlook (product identifier BHMHWOMOB; WMO Header FLUS44 KMOB): The WFO Mobile Hazardous Weather Outlook (HWO) is issued routinely once a day between 5:00 and 6:00 am. The HWO will be updated when the information contained within become unrepresentative of expected conditions. WFO Mobile does not have specific thresholds of adding fire danger threats in this product, but we will discuss fire weather hazards such as extremely dry conditions and/or strong gusty winds. WFO Mobile may mention active Fire Weather Watches and Red Flag Warnings, and may include SPC Fire Weather Outlook (Days 1 and 2) information in the HWO.

Forecast is updated when changes in the dry fire weather or meteorological conditions do not reflect the forecast.

VIII. Red Flag Program:

The purpose of Fire Weather Watch and Red Flag Warning is to alert the public and land management agencies of developing weather conditions that, when combined with critically dry wildland fuels, could lead to dangerous wildfires.

Fire Weather Watch for Red Flag conditions. A fire weather watch is issued beyond the first forecast period (12 hours). The watch is issued generally 12 to 48 hours in advance of the expected conditions but can be issued up to 72
hours. When a watch is issued, the fire weather forecast will be updated, and the term *FIRE WEATHER WATCH* will be headlined. The watch will remain in effect until it expires, is canceled, or upgraded to a red flag warning. The Area Forecast Discussion will also be updated.

Red Flag Warning. A red flag warning is issued when there is high confidence that red
flag criteria will occur within the next 12 hours, or if those criteria have already been met. This product will be issued only after consultation with state and federal agencies. When a warning is issued, the fire weather forecast will be updated, and the term *RED FLAG WARNING* will be headlined. A cancellation statement (or headlines in the FWF) should terminate the warning. The Area Forecast Discussion will also be updated.

Format Guidelines: A FIRE WEATHER WATCH OR RED FLAG WARNING headline shall be placed in appropriate fire weather products. Also, the headline should be placed in the pertinent zone section of the Fire Weather Forecast until the watch/warning expires or is canceled. The headline shall include the warning type, location, and effective period. The location should be described in terms of geographic or other easily identified markers, such as cities, towns, rivers, or highways (i.e., instead of stating "RED FLAG WARNING FOR ZONE 475 TONIGHT," it should read something like "RED FLAG WARNING TONIGHT FOR WEST CENTRAL MISSISSIPPI").

Contents: The RFW will include the following elements:

a. The RFW message should state in the Mass Media Header whether the product is for a Red Flag Warning or Fire Weather Watch.

b. The effective UGC Public Zone Codes and the product expiration.

c. A headline which states "Fire Weather Watch" or "Red Flag Warning," the critical weather element(s) causing the event, the effective time of the event, and a description of the affected area.

d. The fire weather zones, if different from public zone number and/or area.

e. A discussion which describes adverse weather conditions.

f. Optional: Call to action statements from Federal or State Fire Agencies..

For an example see **Appendix V** for local weather offices issuances to parishes.

Dissemination:

A. General

The latest Red Flag Warnings/Fire Weather Watch can be found at the following **Internet at the sites listed below:**

WFO Memphis:
http://forecast.weather.gov/product.php?site=meg&product=RFW&issuedby=MEG

WFO Jackson:
http://forecast.weather.gov/product.php?site=JAN&product=RFW&issuedby=JAN

WFO New Orleans:
http://www.srh.noaa.gov/product.php?site=lix&product=RFW&issuedby=LIX

WFO Mobile
http://www.srh.noaa.gov/product.php?site=mob&product=RFW&issuedby=MOB

Red Flag event is defined as a combination of high (or greater) fire danger and critical weather elements.

Criteria for Red Flag Events in Mississippi:
The following criteria must be met in combination with an extended period of dry conditions:

1.) Relative Humidity less than or equal to 25%

2.) 20 foot wind speed of greater or equal to 15 mph

These conditions can be prompted by a strong dry cold front with windy conditions. Fire Danger will be assessed by the land management agencies, and will be obtained from them by the National Weather Service. If Red Flag criteria are occurring or expected within 12 hours, a Red Flag Warning will be issued, and will remain in effect until the conditions abate or are no longer expected. If Red Flag criteria are expected within 24 to 72 hours, a Fire Weather Watch will be issued, and will remain in effect until the watch is upgraded to a Red Flag Warning, or conditions are no longer expected to develop.

Procedures
Whenever the meteorological criteria for a Red Flag event are occurring or expected to occur within 72 hours, the NWS office will contact the land management agencies to obtain a determination of fire danger. It is important to coordinate with the landmanagement agencies both state and federal. If the combined fire danger rating and meteorological criteria warrant a Red Flag product, the NWS and land management agencies will reach a consensus on whether to issue the product as well as for which areas at which times
.
Fire Danger Statements
When fire danger or fire occurrence is high and is coupled with critical weather conditions, user agencies may request that the NWS issue a Fire Danger Statement. These statements will be used in coordination with the requesting agency and will only be issued with their approval. The NWS will use the (SPS) format for these issuances. Call to action statements for the public will be from Federal or State Fire Agencies.

Examples see **Appendix VI**.

Participation in Interagency Groups
The NWS and its customers will meet from time to time, for the purpose of reviewing the operational relationships agreed to in this plan, and as partners in other interagency meetings. Meetings may be between one NWS office and all of its customers from its CWA in Mississippi or a state meeting of all NWS offices and fire weather customers within Mississippi, or a meeting conducted by a customer group with the NWS offices invited
either individually or collectively. Customers may at times invite NWS representation to serve on an interagency group at either the state or national level. These groups may serve a variety of purposes, such as program review, service evaluation, scientific advisory, or joint decision making.

IX. Special Meteorological Services

On-site services (IMET/ATMU) Advance Technology Meteorological Unit Services

The Advance Technology Meteorological Unit (ATMU) is a modularized and mobile system of equipment used by an Incident Meteorologist (IMET) for data collection and product preparation. The ATMU is a national resource. There are a number of ATMUs cached around the country. The ATMU consists of two (2) modules. The first module contains a laptop computer, a satellite dish for obtaining weather data, and a printer. This module is also a national resource, but is located at the National Weather Service offices that have an IMET on station. The second module consists of a theodolite for taking pibal observations. Requests for the ATMU, AMRS, and IMET should be made through the local Interagency State Coordination Center. Typically, the IMET nearest the incident will be deployed. However, during times of limited resources, IMETs from other areas of the country may be called. This decision will be made by the Special Meteorologist to NIFC(SMN) in conjunction with the MIC and IMET from the affected offices. The mobilization of the ATMU, AMRS and IMET is coordinated through the local State Interagency Coordination Center, the Southern Area Interagency Fire Cache, and the Southern Area Coordination Center (SACC). Demobilization is initiated at the incident, and coordinated through the Coordination Centers previously mentioned. For more specific information, reference the Southern Area and the National Interagency Mobilization Guides. The requesting agency is responsible for any storage of the unit while in transit, and shelter for the IMET and unit at the site. A sheltered work area, of at least 50 square feet with a table and chair, must be protected from excessive dust free of standing water or condensation, and must be heated and/or cooled sufficiently to allow efficient operation of equipment. Power (120V AC) must be provided for the ATMU's electrical equipment and priority telephone access during certain short periods each day must be made available.

The Air Transportable Mobile Unit (ATMU) must be set up and operated by an ATMU certified meteorologist (called an incident meteorologist or IMET) working closely with a Fire Behavior Analyst (FBA) or Planning Section Chief.The Fire Weather Focal Point or meteorologist-in-Charge at NWS offices should be made aware of the need for ATMU and IMET services in their County Warning and Forecast Area (CWFA).

Requests for ATMUs and IMETs should be made through the US Forest Service Regional Dispatch. Requests for Mississippi should come from the Southern Area Coordination Center (SACC). The ATMU is available upon request for duty at an incident fire, a critical prescribed burn, or other weather-sensitive incident.

Special fire services are those services that are uniquely required by land management agencies and go beyond the normal forecast operations of the NWS. Special services include the Advanced Technology Meteorological Unit (ATMU), the All Hazards Meteorological Response System (AMRS), Incident Meteorologist (IMET) deployment, station visits, weather observer training, participation in user agency personnel training, and other pertinent meteorological services. Typically, special services require NWS personnel to be away from the forecast office and, in some instances, be in overtime status. User agencies are responsible for covering the cost of NWS overtime, travel

and per diem expenses. Reimbursement of costs for special services will be as outlined in the Interagency Agreement for Meteorological Services.

Upon arrival at the incident and after going through the appropriate check-in procedures, the IMET will:

1. Brief the Fire Behavior Analyst (FBAN), Planning Section Chief (PSC), and the Incident Commander(IC) on current and expected weather as it affects the fire.

2. Establish a schedule with the IC and the FBAN for written forecasts.
3. Request a briefing of the fire situation and potential behavior problems for theFBAN. As time and resources permit, incident management should arrange for an aerial inspection trip for the meteorologist and should provide the forecaster with current fireline maps. If possible, the IMET should be assigned a radio with the fireline frequency.
4. Arrange for a schedule of observations from key points around the fire and from nearby lookouts and fire danger stations, in cooperation with the FBAN and PSC.

On large fires, some personnel (at least two) should be permanently assigned to this duty. On smaller fires, this information can be provided by Division Supervisors equipped with belt weather kits.

X. Fire Weather Training

National Weather Service fire weather meteorologists are available to assist fire control agencies with training at fire behavior school and other related courses. Requests for assistance should be forwarded to the Meteorologist-in-Charge (MIC) at the respective NWS office(s) as early as possible after dates for such training have been determined. The responsibility of training land management agency employees will be that of the agencies themselves. However, the NWS will be available to assist when requested to do so. Any expenses incurred by the NWS will normally be charged to the user agency, unless other arrangements have been made.

XI. Other Special Services

Other special services include weather station visits by user agency personnel, weather observer training, and course development work. These activities would be typically be at the full expense of the requesting agency unless other arrangements have been made.

XII. Communications

The primary means of communication used by the NWS is Advanced Weather Interactive Processing System (AWIPS). Products transmitted through AWIPS include: presuppression Fire Planning Forecasts, Fire Weather Watches, Red Flag Warnings, Fire Danger Statements, Fire Matrix Zone Forecasts, and NFDRS station forecasts. Spot forecasts will be disseminated by means of the internet, with telefax (FAX) as a backup. Anytime a request for a spot forecast is made by fax, the requesting agency must include a FAX number. A voice number should also be included in the event problems or questions arise with the requests, the forecast, or the transmission.

Public products produced by the National Weather Service are available over All Hazards NOAA Weather Radio (NWR).

As of December 2014, the following 12 NWR Transmitters service Mississippi.

Site, Call Sign, Frequency, Counties Broadcasted for, NWS Office

MEMPHIS, WXK-49, 162.475 MHz, DESOTO, TATE, TUNICA, MARSHALL, BENTON Counties; NWS MEMPHIS, TN

TAYLOR AT OXFORD, KIH-52, 162.550 MHz, , DESOTO, TATE, TUNICA, MARSHALL, BENTON, COAHOMA, QUITMAN, PANOLA, TALAHATCHIE, YALOBUSHA, GRENADA, LAFAYETTE, CALHOUN, UNION, PONTOTOC, CHICKASAW Counties; NWS MEMPHIS, TN

DUMAS AT BOONEVILLE, KIH-53, 162.400 MHz, BENTON, TIPPAH, ALCORN, ITAWAMBA, TISHOMINGO, LEE, MONROE, PRENTISS, UNION Counties; NWS MEMPHIS, TN

HATLEY AT ABERDEEN, KUT-404, 162.450 MHz, CHICKASAW, CLAY, ITAWAMBA,LEE, LOWNDES, MONROE, PONTOTOC; Counties; NWS MEMPHIS, and NWS JACKSON.

INVERNESS, KIH-50, 162.425 MHz, BOLIVAR, SUNFLOWER, TALLAHATCHIE, GRENADA, LE FLORE, CARROLL, WASHINGTON, HUMPHREYS, HOLMES, ISSAQUENA, SHARKEY, YAZOO Counties; NWS JACKSON, MS

CARTHAGE, KJY-33, 162.425 MHz, ATTALA, HOLMES, LEAKE,MADISON, NESHOBA,NEWTON,RANKIN, SCOTT Counties; NWS JACKSON, MS

ACKERMAN, KIH-51, 162.475 MHz, YALOBUSHA, CALHOUN, CHICKASAW, MONROE, GRENADA, LEFLORE, MONTGOMERY, CARROLL, WEBSTER,

CLAY, CHOCTAW, LOWNDES, ATTALA, WINSTON, NOXUBEE, OKTIBBEHA Counties; NWS JACKSON, MS

JACKSON, KIH-38, 162.400 MHz, ISSAQUENA, WARREN, JEFFERSON, CLAIBORNE, YAZOO, MADISON, HINDS, RANKIN, COPIAH, SIMPSON, LAWRENCE, LINCOLN, LEAKE, SCOTT, SMITH Counties; NWS JACKSON, MS

BUDE at SMITHDALE, KIH-48, 162,550 MHz, JEFFERSON, ADAMS, WILKINSON, FRANKLIN,

AMITE, COPIAH, LINCOLN, PIKE, LAWRENCE, WALTHALL Counties; NWS JACKSON, MS

MELBA AT HATTIESBURG, KIH-47, 162.475 MHz, SIMPSON, LAWRENCE, WALTHALL, JEFFERSON DAVIS, MARION, SMITH, COVINGTON, LAMAR, JONES, WAYNE, FOREST, PERRY, GREENE Counties; NWS JACKSON, MS

ROSE HILL AT MERIDIAN , KIH-49, 162.550 MHz, SCOTT, SMITH, COVINGTON, NESHOBA,

NEWTON, JASPER, JONES, KEMPER, LAUDERDALE, CLARK, WAYNE Counties; NWS JACKSON, MS

LEAKSVILLE AT GREEN COUNTY, WNG-640, 162.425 MHz , WAYNE , PERRY , GREENE , STONE Counties; NWS MOBILE, AL

GULFPORT, KIH-21, 162.400 MHz, PEARL RIVER, STONE, GEORGE, HARRISON, HANCOCK, JACKSON Counties; NWS NEW ORLEANS, LA

Other means of communication may be utilized upon mutual agreement with user agencies.

XIII. Wildland Fire Agency Responsibilities

Operational Support and Predictive Services Program Management
The wildland fire agencies will oversee the fire weather observation program, including the sighting and maintenance of the observing equipment, fire weather training of their personnel, and the proficiency of their personnel in the use of the NWS Spot software. Monitoring, feedback and improvement land management agencies will monitor the quality and timeliness of NWS of new technologies being implemented to monitor meteorological or fuel parameters, or improve communication, coordination, training, or reference. Wildland fire agency personnel may, with prior arrangement, visit an NWS office to acquire a knowledge of NWS technologies used in the monitoring of weather, or the preparation of products. Agency Computer Resources Internet will be the primary method of obtaining the Fire Weather Forecast, Fire Matrix Zone Forecast, Red Flag Warning, Fire Weather Watch, and for both requesting and receiving a Spot Forecast. As a backup method, a request can be made to the weather service for a product to be faxed to the customary agency. NFDRS observations will be entered into WIMS, and forecasts and calculations based on these observations will be received by WIMS, or by internet via a WIMS website.

XIV. Fire Weather Observations:

Fire weather observations stations provide the specialized weather observations for fire weather forecasts, wildfire control and suppression, and various other land management operations. These stations were selected very carefully in each state and federal district. Sites were chosen to represent homogeneous weather conditions across a district. Stations may either be manned sites operated by land management agencies, or unmanned, Remote Automatic Weather Stations (RAWS) maintain by any of the federal or state land management agencies in the area.

All observations stations are assigned a 6-digit identification number. The first two digits indicate the state, the second two digits indicate the county, and the last two digits indicated the consecutively-assigned station number for that county. Land managers who wish to have a number assigned to a station should contact the GACC meteorologist at SACC in

Atlanta. RAW stations are also assigned an 8 character alphanumeric identifier based on satellite transmission time (the DCP number, issued by the National Environmental Satellite Service(NESS)). Observations from a satellite that telemeter RAWS will automatically flow into WIMS via the NESDIS ID. Some stations may not be part of the satellite network and the information has to be entered manually into WIMS. Even with automated conversions to O type observations, the responsibility still resides with the RAWS owner to ensure that observations are being transmitted, recorded, and archived properly in WIMS. The additional automation will greatly simplify the daily process, however there will still be the need for observations to be checked for integrity and consistency. Managing the NFDRS model parameters will still be manual process in WIMS. Automation of O type observations will help to streamline the WIMS collective that is distributed to the NWS via AWIPS. NFDRS forecasts are based on RAWS observations that appear on the daily collective.

Numbering and archiving of observation stations. The GACC, when requested to do so by a land management agency, shall assign a station indentifying number for fire weather observation platforms. The land management agency will provide the station name, location (county , lat/long) and elevation to the GACC meteorologist. The GACC meteorologist will assign the number and assist the station owner in establishing a station catalog in WIMS. The numbering convection uses a six digit number, starting with 22 (for MS). The following two digit number designates the county, and the counties are numbered from 01 in the northwest to 82 in the southeast. The last two digits will correspond to the number of sites in the county. The GACC meteorologist is responsible for maintaining a database of RAWS stations in his area. This information can be provided to the NWS regional program manager upon request.

XV. Effective Date Mississippi Annual Operating Plan:

The effective dates of the Mississippi Annual Operating Plan will be determine when the area office comes into the an agreement on the plan. This plan will be subject to review and revision by all signatory parties each year, or more frequently as operations warrant. The plan will be available on the fire weather homepage in MS. A copy will be forwarded to NWS Southern Region Headquarters. NWS Southern Region will forward a copy to NIFC and NWS Headquarters. Terms and conditions in this plan are subject to review by the National Weather Service and the land management agency customers on at least an annual basis, or more frequently as operations require.

XVI. Procedures for billing

Costs to user agencies will be calculated on the basis of expense reports submitted to the NWS regional headquarters by field personnel. Copies of expense reports will be forwarded to appropriate user agencies by NWS regional headquarters. This procedure will enable agencies to determine costs to be reimbursed during a given fiscal year. Billing of user agencies will be accomplished by NWS regional submission of appropriate expense reports to the NOAA Reimbursable Division. Bills will include a statement of services, including dates and locations All questions relating to billing procedures, charges, current costs, and individual expense reports should be directed to the appropriate **NWS regional contact** or the **NWS Technical Monitor**.

Southern Region Fire Weather Meteorologist (W/SR11x1)

Paul Witsaman 817-978-1100 ext 116 paul.witsaman@noaa.gov

Technical Monitor For NWS

The NWS Technical Monitor for this Agreement shall be:

Fire Weather Program Manager, W/OM12
NOAA/National Weather Service
1325 East-West Highway
Silver Spring, MD 20910
Telephone: 301-713-1677 ext. 131

XVII. Weather Forecast Offices County Responsibility

Each National Weather Forecast Office providing service in the state of Mississippi is staffed with meteorologists trained in fire weather forecasting. This section will discuss the varieties of services provided by each NWS Office and the geographical areas for which NWS offices are responsible. The service area covered by this AOP is the entire state of Mississippi. Forecast areas are tied to the “radar umbrella” of the WSR-88D of the WSR-88D Doppler Radar. This means that forecasts are not bound by state political borders, although county borders are generally observed. For a map of the fire zones in Mississippi, see the appendix.

The Memphis (MEG) forecast area covers North Mississippi.

The northern Mississippi counties covered by WFO MEG (Memphis,TN) include:
Alcorn, Benton, Calhoun, Chickasaw, Coahoma, DeSoto, Itawamba, Lafayette, Lee, Marshall,
Monroe, Panola, Pontotoc, Prentiss, Quitman,Tallahatchie, Tate, Tippah, Tishomingo, Tunica
Union, Yalobusha.

The Jackson (JAN) forecast area covers Central Mississippi.

The central Mississippi counties covered by WFO JAN (Jackson, MS) include:
Adams, Attala, Bolivar, Carroll, Choctaw, Claiborne, Clay, Copiah, Covington, Franklin, Forrest Grenada, Hinds, Holmes, Humphreys, Issaquena, Jasper, Jefferson,Jefferson Davis, Jones, Kemper, Lamar, Lauderdale, Lawrence,Leake, Leflore, Lowndes, Madison, Marion, Neshoba, Newton, Oktibbeha, Rankin, Scott, Simpson, Sharkey,Sunflower, Warren, Washington, Webster Winston.

The New Orleans (LIX) forecast area covers Southwest and Coastal Mississippi.

The southern Mississippi counties covered by WFO LIX (New Orleans, LA) include: Amite, Hancock, Harrison, Jackson, Pearl River, Pike, Walthall, Wilkinson.

The Mobile (MOB) forecast area covers Southeast Mississippi.

The Southeast Mississippi counties covered by WFO MOB (Mobile, AL)
Include: George, Greene, Perry, Stone, Wayne.

XVIII. NWS Levels of Fire Weather Responsibilities

National Weather Service Headquarters

NWS Headquarters, located in Silver Spring, Maryland, establishes policies and coordinates the national fire weather program. The national program manager coordinates the program with the regional program managers. The national program manager also works with the national headquarters of the Federal forestry and land management agencies and the Association of State Foresters in determining over all forestry and land management requirements for meteorological support. The national program manager coordinates national training in forestry and fire weather for NWS forecasters.

National Weather Service Regional Headquarters

Regional Headquarters manage the technical operational aspects of the fire weather program within each region. They also provide guidance and assistance to meteorologists-in-charge(MIC) on program operations and problems through supplements to the National Directives System (NDS) and conferences. Regional Headquarters advise National
Headquarters on matters pertaining to technical planning and operations. The regional program managers coordinate the
regions' fire weather programs and advise Regional Directors on the operational and administrative aspects of the regions' programs.

Weather Forecast Offices (WFO)

Weather Forecast Offices prepare and disseminate forecast products for all sectors of the population, including those for the Fire Weather program. These offices are responsible for providing forecasts for user agencies within their County Warning and Forecast Area (CWFA). Most offices have a designated fire weather focal point or fire weather program leader.

The National Weather Service Forecast Offices serving Mississippi will provide 24-hour, 365 days a year service. WFO's can be reached at:

National Weather Service
Memphis,TN
7777 Walnut Grove Rd. OM-1
Memphis, TN 38120
(901) 544-0399

National Weather Service
Jackson,MS
234 Weather Service Drive
Flowood, MS 39232
(601) 936-2189

National Weather Service
New Orleans, LA
62300 Airport Rd
Slidell, LA 70460-5243
(504)522-7330

National Weather Service
Mobile, AL
8400 Airport Blvd Bldg 11
Mobile, AL 36608
(251)-633-6443

Program Leaders (or Focal Points)
Fire weather focal points and program leaders are the "customer service representatives" for the program. The focal points or program leaders, as representatives of the MIC's, are in regular contact with land management agencies, helping them assess their meteorological needs, informing them of NWS products and services available to meet these needs, and educating them in the most effective use of the various products and resources, including NOAA Weather Radio(NWR). Focal points and program leaders will work with users to utilize existing NWS products and services produced for other programs that could meet the requirements of wildland management. The focal points and

program leaders are also tasked with ensuring staff meteorologists are trained and remain proficient in preparing forecast products for support of the fire weather program.

Appendix I

NATIONAL AGREEMENT FOR METEOROLOGICAL SERVICES IN SUPPORT OF AGENCIES WITH LAND MANAGEMENT AND FIRE PROTECTION RESPONSIBILITIES

(Document taken from NOAA/NWS Operational Manual Chapter D-6)

I Introduction

This National Agreement is between the National Weather Service (NWS) and agencies with land management and fire management responsibilities signatory to this agreement. They are referred to in this agreement as “NWS” and “USER AGENCIES,” respectively.

The User Agencies are responsible for the maintenance, improvements, and protection of the wild lands, of owned or held in trust by the United States. Accurate and timely weather information is required to manage effectively and efficiently this valuable national resource. The NWS has the expertise, organization, and legal charter to satisfy this need nationally. It is with this knowledge that this Agreement is entered into. Its purpose is to combine resources so as to best serve the needs of the public and to fulfill the obligations of the respective agencies.

Authority

This agreement is authorized under the Economy Act (31 U.S.C. 686; 15 U.S.C. 313; 49 U.S.C. 1463) and the Cooperative Forestry Assistance Act of 1978 (16 U.S.C. 2101), etc.

III Objectives

The objectives of this Agreement are to identify meteorological services to be provided, establish the interagency relationships, and define financial and other obligations of the NWS and User Agencies.

IV Responsibilities

1.1_ National Weather Service

1.1_ Basic Meteorological services will be provided during normal working hours in accordance with Operating Plans for designated NWS offices to the extent of NWS fire weather resources. NWS regional headquarters will identify to the User Agency headquarters a list of the designated fire weather offices on an annual basis. These services will be made available without cost and may include:

1.1_ Routine daily fire weather forecasts
1.2_ Outlooks and discussions
1.3_ Weather observations
1.4_ Red flag forecasts
1.5_ Spot forecasts
1.6_ Prescribed burn forecasts
1.7_ Smoke management forecasts and information
1.8_ Consultation and technical advice
1.9_ Amendments / updates

1.2_ Fire Weather Training

The NWS recognizes the need for training in fire weather meteorology for NWS forecasters. To the extent of available resources, the NWS will meet this need.

1.3_ Special meteorological services

These services will be provided by designated NWS offices on a reimbursable basis as stated in Section IV B.

1.3.1_ Weather observer training
1.3.2_ Weather observation station visitations
1.3.3_ Participation in User Agency training activities
1.3.3.1_ Course development carried out at User Agency facilities
1.3.3.2_ Classroom training
1.3.3.3_ On-site meteorological services
1.3.3.4_ Other special services

1.4_ User Agencies

The following services and resources will be provided by User Agencies:

1.4.1_ Fire-management computer systems

Where existing fire management computer systems are locally, access to the system will be provided.

2.1_ Fire weather observations

2.1.1_ Provide daily surface weather observations and enter data into fire-management computer systems

2.1.2_ Provide all equipment, equipment maintenance, and inspection of weather-observing sites.

2.1.3_ Meet all travel and per diem costs associated with User Agencies' requests for visits of NWS personnel to weather-observing sites.

2.1.4_ Provide for collection of remote automatic weather systems data and entry into the fire-management computer system.

2.1.5_ Provide observations for site-specific and other special forecasts.

3.1_ On-site meteorological support

3.1.1_ Meet costs directly associated with on-site meteorological support by NWS personnel. This includes costs incurred by the backup NWS office.

3.1.2_ Provide logistical and weather observation support to NWS personnel at on-site operations.

3.2_ Provide access to telecommunication services where available.

4.1_ Training

4.1.1_ Meet per diem and travel costs for NWS personnel participating in the conduct of User Agency training.

4.1.2_ Provide technical assistance, instruction, and supporting material for NWS-sponsored fire weather training sessions.

5.1_ Other special services

User Agencies will provide logistics support and meet all overtime, travel, and per diem costs of NWS personnel associated with the provision of all other special services.

6.1_ Joint Responsibilities

NWS and User Agencies shall prepare an annual Operating Plan for individual fire weather office areas of responsibility. This plan will identify the basic weather services covered under Section IV.

V Procedures for requesting services

Procedures for ordering services will be specified in Operating Plans for each NWS fire weather office.

VI Billing Procedures

Costs to be recovered from User Agencies will be calculated on the basis of expense reports submitted to the NWS regional headquarters by field personnel. Copies of expense reports will be forwarded to appropriate User Agencies by NWS regional headquarters. This procedure will enable agencies to accurately determine costs to be reimbursed during a given fiscal year. Billing of User Agencies will be accomplished by NWS regional submission of appropriate expense reports to the NOAA Reimbursables Division. Bills will include a statement of service rendered, dates it was provided, and location where provided.

All questions relating to billing procedures, charges, current costs, and individual expense reports should be directed to the appropriate NWS regional contact or the NWS Technical Monitor.

VII Amendments

Upon written notice, the terms of this Agreement are subject to amendment at any time by mutual agreement of the parties. The signatory agencies agree to consider expansion of this Agreement to cover areas of mutual concern, e.g., changing technology and improved procedures, as opportunities for such cooperation become available.

VIII Terms of National Agreement

1. The terms of this Agreement shall become effective upon execution by NWS and any or all User Agencies and shall remain in effect until such times as the Agreement is terminated by mutual agreement. Any agency may withdraw at any time by ninety (90) days written notice to all parties.
2. This Agreement does not constitute a financial obligation for any party in excess of appropriations authorized by law and administratively allocated for the purposes intended.

I. Technical Monitor for NWS

The NWS Technical Monitor for this Agreement shall be:

Fire Weather Program Manager, W/OM12
NOAA/National Weather Service
1325 East-West Highway
Silver Spring, MD 20910

Telephone: (301) 713-1677 ext. 131

Definitions

When the following terms are used in this Agreement or in an operating plan, such terms will have the meanings stated below.

1. **Fire Weather Office Operating Plan**

A procedural guide which describes the services provided within the area of a fire weather office's responsibility.

2. **Basic Meteorological Services**

Basic meteorological services are those state-of-the-science meteorological forecasts, warnings, observations, and statements produced in a designated NWS fire weather office during normal working hours.

3. **Fire Weather Zone or District**

A fire weather zone or district is the are of routine service responsibility as defined by the NWS. This area is usually defined by climatological factors, but may be modified somewhat to the administrative boundaries of the User Agencies.

4. **Normal Working Hours**

Normal working hours are defined in the Operating Plan, but usually cover 8-hour workdays, Monday through Friday, except during a fire season.

5. **Prescribed Fire**

Prescribed fire is a fire burning in wildland fuels according to a planned prescription and confined within planned boundaries for the purpose of achieving specific objectives of resource management. (Prescribed burning is the practice of prescribed fire use.)

6. **Red Flag**

Red flag is a program which highlights the onset of critical weather conditions conducive to extensive wildfire occurrences.

7. **Special Meteorological Services**

Meteorological services uniquely required by User Agencies which cannot be provided at a designated NWS fire weather office during normal working hours.

8. **Spot Forecasts**

Spot forecasts are site-specific weather forecasts. They are issued upon request of User Agencies for wildfire, prescribed burns, or special projects.

9. **On-site**

That special service which dedicates a fire weather forecaster to a wildfire, prescribed fire, or special project such that the fire weather forecaster is removed from providing basic services at his/her assigned weather office.

Appendix II
FIre Weather Definitions for NWS Products

Fire Weather Forecast (FWF) Parameter Definitions

1. CLOUD COVER: Represents the average sky condition over the specified area during the specified period. “Sunny” or “Clear” <10%...”Mostly Sunny” or “Mostly Clear” > or = 10% and <30%...”Partly Cloudy” or “Partly Sunny” >or = 30% and < 60%...”Mostly Cloudy” > or = 60% and <80 %...”Cloudy” > or = 80%.

2. CHANCE PRECIP: Represents the chance (rounded to the nearest 10%) of measurable (> or = 0.01 inches) precipitation over the specified area during the specified period.

3. PRECIP TYPE: Represents the predominant precipitation type over the specified area during the specified period. Note: The only exception is when showers and thunderstorms are expected, only thunderstorms will be used as the precipitation type.

4. PRECIP(RAIN) AMOUNT: Represents the precipitation amount (hundreths of an inch) whenever the chance of precipitation is > or = 20%.

5. PRECIP(RAIN) DURATION: Represents the duration of measurable precipitation (hours) when the chance of precipitation is > or = 20%.

6. PRECIP BEGINS OR ENDS: Represents the beginning or end time (to the nearest hour) of measurable precipitation when the chance of precipitation is > or = 20%.

7. MIXING HGT: Represents the mixing height, or height (in feet or meters above the ground) to which vigorous vertical mixing takes place.

8. 500 METER or 1700 FEET MXG HGT TEMP: Mixing height temperature at 500 meters or 1700 feet.

9. 500 METER or 1700 FEET TRANSPORT WND: Represents the transport wind or average wind direction or speed (M/S or MPH) from the surface to 500 meters or 1700 feet.

10. Morning Mixing Height: Maximum mixing height in the morning in meters.

11. TRANSPORT WND: Represents the transport wind, or the average wind direction or speed (M/S or MPH) from the surface to the top of the mixed layer(mixing height).

12. STAGNATION INDEX: The stagnation index is a number from 0 to 3 computed from the forecast variables that are produced by a complex model. Used by Mississippi fire managers , who are cognizant of the need to occasionally restrict open burning in order to reduce atmospheric contaminants.

13. STABILITY CLASS: It is used in smoke management forecasts based on wind, solar radiation, and cloud cover. It is used by Arkansas and Louisiana fire managers. A. extremely unstable, B…unstable, C…slightly unstable, D…neutral, E…slightly stable and F stable.

14. MAX/MIN Temp: Represents the expected maximum and minimum temperatures over the specified area during the day and night. MAX/MIN RH: Represents the expected maximum (during the nighttime period) and minimum (during the daytime period) relative humidity (%) over the specified area. Trends of both features for the past 24 hours.

15. 20 Foot AM/PM Winds: Represents the 10-minute average wind speed (MPH) and direction above the ground or vegetative cover that occurs either AM or PM.

16. VENT INDEX/VENT RATE: It is the product of the Transport Winds and Mixing Heights…which can be metric or in english units. The higher the Vent Index the better the dispersion.

17. CATEGORY DAY: Dependent on the vent index…1 (poor dispersion) to 5 (good).

18. DISPERSION INDEX: Computed from forecasts variables and that include 20 ft wind speed, mixing height, transport wind and cloud cover. This will help to determine how well smoke will disperse. Values from 1 (poor) to >100 (excellent).

19. LOW VISIBILITY OCCURRENCE RISK INDEX (MAXIMUM LVORI): an index (1-10) that is computed from relative humidity and the dispersion index. High values suggest that fog could mix with smoke resulting in extremely low visibility.

20. EXTENDED FORECAST: a 3 to 7 day forecast, including highs and lows, and rain chances. Use wind expression if windy conditions are expected.

21. UPDATING the Fire Weather Planning Forecast:
The Fire Weather Forecaster will maintain a weather watch to ensure that the forecast remains accurate. When unexpected changes occur or are forecast to occur which significantly deviate from the previous forecast, the forecast may be updated.

22. MIN/MAX Relative Humidity: Minimum and maximum humidity values for the days one through two. Minimum humidity for days 3 through 7.

23. DISCUSSION: A short term discussion on the meteorological effects on fire agency operations...esp with fog, precip, and minimum rh potential. Some discussion areas will heave a Red Flag tag above it.

24. LIGHTENING ACTIVITY LEVEL(LAL): It is a measure of the amount of lightning activity using values 1 to 6.

25. REMARKS: Any significant conditions that will affect the fire weather zone...which may include any fog potential..

Appendix III

Catalogue of Fire Weather Observation Sites.

North Mississippi

1. Highway 41 NFDRS ID 221502
2. Monroe NFDRS ID 222401
3. Tishomingo NFDRS ID 220601
4. Tupelo NFDRS ID 221602

5. Winborn NFDRS ID 220202
6. Yallobusha NFDRS ID 222101

Central Mississippi

1. Bienville NFDRS ID 225101
2. Bude NFDRS ID 226102
3. Copiah NFDRS ID 225502
4. Covington NFDRS ID 226502
5. Holmes NFDRS ID 223501
6. Lauderdale NFDRS ID 225301
7. Marion NFDRS ID 227202
8. Neshoba NFDRS ID 224601
9. Noxubee fts NFDRS ID 224101
10. Tombigbee NFDRS ID 223701
11. Ragland Hills NFDRS ID 227401
12. Oktibbeha NFDRS ID 223301
13. Delta Station NFDRS ID 224201

South Mississippi

1. Black Creek NFDRS ID 227802
2. Greene NFDRS ID 227601
3. Pike NFDRS ID 227001
4. Ragland Hills NFDRS ID N/A

5. Wausau NFDRS ID 226702
6. Camp Keller NFDRS ID N/A
7. Grand Bay NFDRS ID 228204
8. Hancock NFDRS ID 228002
9. Sandhill Crane NFDRS ID 228202

Appendix IV
Fire Weather Glossary Terms

Active crown fire: A fire in which a solid flame develops in the crowns of trees.

Aerial fuels: Standing and supported live and dead combustibles not in direct contact with the ground and consisting mainly of foliage, twigs, branches, stems, cones, bark, and vines.

Air Transportable Modular Unit (ATMU): A weather data collection and forecasting facility used by an IMET.

Automated Surface Observing System (ASOS): The computer system which produces most of the National Weather Service surface observations.

Aspect: Direction toward which a slope faces.

Available fuel: That portion of the total fuel that would actually burn under various environmental conditions.

Advance Weather Interactive Processing System (AWIPS): The main computer system that the National Weather Service uses to compose and transmit its forecasts and warnings.

Backfire: A fire set along the inner edge of a fireline to consume the fuel in the path of a wildfire and/or change the direction of force of the fire's convective column.

Backing wind: Wind that changes direction in a counter clockwise motion.

Blowup: A sudden increase in fireline intensity or rate of spread of a fire sufficient to preclude direct control or to upset existing suppression plans. This is often accompanied by violent convection.

Burning index: An estimate of the potential difficulty of fire containment as it relates to the flame length at the head of the fire.

Burn-off temperature at 500 meters: The forecast temperature at the time in which the mixing height is expected to reach 500 meters.

Carrier fuels: The fuels that support the flaming front of the moving fire.

Chain: A unit of measure equal to 66 feet (20 meters).

County/Parish Warning and Forecast Area (CWFA): The area in which a NWS office is responsible for issuing forecasts and warnings.

Compactness: Spacing between fuel particles.

Creeping fire: A fire burning with a low flame and spreading slowly.

Crown fire: A fire that advances from top to top of trees or shrubs more or less independent of a surface fire.

Dead fuels: Fuels with no living tissue in which moisture content is governed entirely by absorption or evaporation of atmospheric moisture.

Dispersion: The decrease in concentration of airborne pollutants as they spread throughout an increasing volume of atmosphere.

Drainage wind: Normal nighttime airflow directed downslope or downvalley, caused by cooling of the air near the earth's surface. Air sinking toward lower elevations is usually quite gentle in nature.

Dry lightning: A thunderstorm in which little if any precipitation occurs at the ground.

Duff: The layer of decomposing organic materials lying below the litter layer of freshly fallen twigs, needles, and leaves and immediately above the mineral soil.

Effective windspeed: The midflame windspeed adjusted for the effect of slope on fire spread.

Equilibrium moisture content: Moisture content that a fuel particle will attain if exposed for an infinite period in an environment of specified constant temperature and humidity.

Extreme fire behavior: Fire behavior characterized by one or more of the following...high rate of spread...prolific crowning and/or spotting...presence of fire whirls...strong convection column.

Eye-level (six-foot) wind: Wind measured at eye level by a hand-held wind meter. These winds are affected by vegetation and terrain and are often used as mid-flame wind.

Fine fuel moisture: The moisture content of fuels such as grass, leaves, ferns, tree moss, pine needles, and small twigs.

Fine (light) fuels: Fast-drying dead fuels, generally characterized by a high surface area-to-volume ratio. They have diameters 1/4 inch or less. These fuels (grass, leaves, needles, etc.) ignite readily and are consumed rapidly by fire when dry.

Fire behavior: The manner in which a fire reacts to the influences of fuel, weather, and topography.

Fire behavior forecast: A prediction of probable fire behavior, usually prepared by a fire behavior analyst in support of fire suppression or prescribed burning operations.

Fire Behavior Prediction System (FBPS): A system that uses a set of mathematical equations to predict certain aspects of fire behavior in wildland fuels when provided with data on fuel and environmental conditions.

Fire behavior analyst: Person responsible to the planning section chief for establishing a weather data collection system and for developing fire behavior predictions based on fire history, fuel, weather, and topography.

Firebrand: Any source of heat, natural or human made, capable of igniting wildland fuels.

Fire danger: A general term used to express an assessment of fixed and variable factors such as fire risk, fuels, weather, and topography which influence whether fires will start, spread, and do damage; also the degree of control difficulty to be expected.

Fire danger rating: A fire management system that integrates the effects of selected fire danger factors into one or more qualitative or numerical indices of current protection needs.

Fire front: The part of a fire within which continuous flaming combustion is taking place.

Fire season: Period(s) of the year during which wildland fire are likely to occur, spread, and affect resources to warrant organized fire management activities.

Fire storm: Violent convection caused by a large continuous area of intense fire.

Fire weather: Weather conditions which influence fire ignition, behavior, and suppression.

Fire weather service area: A geographical area of responsibility for which the local National Weather Service office provides fire weather products.

Fire weather watch: A NWS product used to alert fire fighting officials of a potential critical fire weather situation.

Fire whirl: Spinning vortex column of ascending hot air and gases rising from a fire and carrying aloft smoke, debris, and flame.

Flame depth: The depth of the fire front.

Flame height: The average maximum vertical extension of flames at the leading edge of the fire front.

Flame length: The distance between the flame tip and the midpoint of the flame depth at the base of the flame; an indicator of fire intensity.

Flare-up: Any sudden acceleration in rate of spread or intensification of the fire.

Flash fuels: Fuels such as grass, leaves, draped pine needles, fern, tree moss, and some kinds of slash which ignite readily and are consumed rapidly when dry.

Free-air wind: The wind above ground level and not influenced by terrain, vegetation, etc.

Fuel: Combustible material.

Fuel class: A group of fuels possessing common characteristics.

Fuel group: An identifiable association of fuel elements of distinctive species, form, size, arrangement, or other characteristics. General fuel groups are grass, brush, timber, and slash.

Fuel moisture: The amount of water in a fuel, expressed as a percentage of the ovendry weight of that fuel.

Fuel moisture indicator stick: A specially prepared stick of known dry weight continuously

exposed to the weather and periodically weighed to determine changes in moisture content as an indication of moisture changes in wildland fuels.

General fire weather forecast (FWF): A forecast, issued daily during the fire season, that is intended for planning purposes by land management agencies. Also called routine fire weather forecast or simply fire weather forecast.

Ground fire: Fire that consumes the organic material beneath the surface litter on the ground.

Gust: A sudden, brief increase in the speed of the wind.

Haines Index (HI): An atmospheric index used to indicate the potential for wildfire growth by measuring the stability and dryness of the air.

Head fire: A fire spreading or set to spread with the wind.

Heavy fuels: Fuels of large diameter, such as logs which ignite and are consumed more slowly than flash fuels.

Holdover fire: A fire that remains dormant for a considerable time.

Hot spot: A particularly active part of a fire.

Humidity recovery: The change in relative humidity over a given period of time generally between late evening and sunrise.

Ignition probability: The chance that a firebrand will cause an ignition when it lands on receptive fuels.

Ignition temperature: The lowest temperature of a substance at which sustained combustion can be initiated.

Incident Meteorologist (IMET): A specially trained meteorologist who provides site specific weather forecasts and information to fire fighting field personnel.

Independent crown fire: A fire that advances in the tree crowns alone, not requiring any energy from the surface fire to sustain combustion or movement.

Initial attack: The actions taken by the first resources to arrive at a wildfire in order to protect life and property and prevent further extension of the fire.

Inversion: An increase of temperature with height in the atmosphere.

Keetch-Byram Drought Index (KBDI): A drought index specifically for fire management applications. It has a numerical range from 0 (no moisture deficiency) to 800 (maximum drought).

Light fuels: See fine fuels.

Lightning Activity Level (LAL): A number, on a scale from 1 to 6, which reflects frequency and character of cloud-to-ground lightning. The scale from 1 to 5 deals with wet thunderstorms where 5 represents numerous thunderstorms with frequent lightning. 6 represents dry lightning.

Litter: The top layer of forest floor, composed of loose debris of dead sticks, branches, twigs, and recently fallen leaves or needles.

Live fuel moisture: Ratio of the amount of water to the amount of dry plant material in living plants.

Live fuels: Living plants, such as trees, grasses, and shrubs.

Long-range spotting: Large glowing firebrands are carried high into the convective column and then fall out downwind beyond the main fire starting new fires.

Micro-Remote Environmental Monitoring System (MICRO-REMS): A mobile weather monitoring station.

Mid-flame wind: The wind that acts directly on the flaming fire front at a level one-half the flame height.

Mixing height: The depth measured from the surface in which vigorous atmospheric mixing occurs. The mixing height is found at the base of an inversion.

Moisture of extinction: The fuel moisture content at which the fire will not spread.

National Fire Danger Rating System (NFDRS): A uniform fire danger rating system that focuses on the environmental factors that control the moisture content of fuels.

National Interagency Fire Center (NIFC): A facility located in Boise, ID, jointly operated by several federal agencies, dedicated to coordination, logistical support, and improved weather services in support of fire management operations throughout the United States.

Offshore flow: Wind blowing from land to water.

One-hour fuel moisture: Moisture content of fine fuels.

One-hundred hour fuel moisture: The moisture content of dead fuels which have diameters between 1 and 3 inches.

One-thousand hour fuel moisture: The moisture content of dead fuels which have diameters between 3 and 8 inches.

Onshore flow: Wind blowing from water to land.

Outflow boundary: A surface boundary that is produced by thunderstorm winds.

Palmer Index: A long-term drought index which measures the moisture supply. The index is used primarily for agricultural and hydrologic concerns since it deals with evapotranspiration, soil recharge, runoff and moisture loss from the surface layer. +4 or higher means extremely wet while -4 or less means extreme drought.

Passive crown fire: A fire in the crowns of trees in which trees or groups of trees torch, ignited by the passing front of the front.

Plume-dominated wildfire: A wildland fire whose activity is determined by the convection column.

Prescribed burn: Controlled application of fire to wildland fuels in either their natural or modified state, under specified environmental conditions, which allows the fire to be confined to a predetermined area, and produce the fire behavior and fire characteristics required to attain planned fire treatment and resource management objectives.

Pressure gradient: The change in atmospheric pressure per unit distance. The greater the change in pressure per unit distance, the stronger the pressure the pressure gradient, and the stronger the wind.

Presuppression: Activities in advance of fire occurrence to ensure effective suppression action. These activities include planning the organization, recruiting and training, procuring equipment and supplies, maintaining fire equipment and fire control improvements and negotiating cooperative and/or mutual aid agreements.

Probability of ignition: The chance that a firebrand will cause an ignition when it lands on receptive fuels.

Probability of Precipitation (POP): The likelihood of a precipitation event occurring at any given point in the forecast area. A precipitation event is the occurrence of a measurable amount (0.01 inch or greater) of liquid moisture falling during a specific period in the forecast area.

As guidance, an expression of uncertainty and areal qualifying terms would have the following relationship to POP values:

POP Statement Value	Expression of Uncertainty	Equivalent Areal Qualifier
<20%	slight chance	isolated,few
20%	slight chance	few,widely scattered
30-40%	chance	scattered
50%	good chance	scattered
60-70%	likely	numerous
80-100%	no remark	

During dry periods, forecasts may contain mention of scattered or numerous showers and thunderstorms, but refer to only 10 or 20 percent chances for precipitation. This is indicative of virga or dry thunderstorms which have a greater chance of producing gusty winds and/or lightning than measurable rainfall.

Rate of Spread (ROS): The relative activity of a fire in extending its horizontal dimensions.

Red flag warning: A National Weather Service product that is issued when red flag conditions (i.e., a critical fire weather situation) are expected.

Relative humidity: The ratio of the amount of moisture in the air to the maximum amount of moisture that air would contain if it were saturated.

Remote Automatic Weather Station (RAWS): An apparatus that automatically acquires, processes and stores local weather data for subsequent transmission to the GOES satellite.

Routine fire weather forecast (FWF): A forecast, issued daily during the fire season, that is intended for planning purposes by land management agencies. Also called general fire weather forecast or simply fire weather forecast.

Running fire: Behavior of a fire spreading rapidly with a well defined head.

Sea breeze boundary: A surface boundary produced by the push of marine air into the land areas.

Short-range spotting: Firebrands, flaming sparks or embers carried by surface winds which start new fires beyond the zone of direct ignition by the main fire.

Six-foot wind: See eye-level wind.

Sky cover: **Clear**...Zero to 1/10 opaque cloud cover.
Mostly Sunny...1/10 to 2/10 opaque cloud cover. The prevailing condition is sunny, but some clouds may be present either over a portion of the area or for a short time over the entire area.
Fair...Less than 4/10 opaque cloud cover. No precipitation. No extremes in weather, visibility, temperature, or wind.
Partly cloudy/partly sunny...3/10 to 6/10 opaque cloud cover.
Mostly cloudy/considerable cloudiness...7/10 to 8/10 opaque cloud cover. Cloudiness will be subject to some variability in amount or location.
Cloudy...9/10 or greater opaque cloud cover. The sky is essentially covered throughout the forecast period.

Slash: Debris resulting from such natural events as wind, fire or such human activities as logging, pruning or brush cutting.

Slope percent: The ratio between the amount of vertical rise of a slope and horizontal distance as expressed in a percent.

Snag: A standing dead tree or part of a dead tree from which at least the leaves and smaller branches have fallen.

Spot fire: Fire ignited outside the perimeter of the main fire by a firebrand.

Spot forecast: A specific weather forecast issued for a particular fire at a specific location.

Spotting: Behavior of a fire producing sparks or embers that are carried by the wind and which start new fires beyond the zone of direct ignition by the main fire.

Squall line: A narrow band or line of thunderstorms producing gusty winds.

Stability: uses wind speed and cloud cover combined with the time of year (basic 290 stuff).

Example...stronger winds near the surface cause mixing...reducing the effects of heating near the ground.
Cloud cover also reduces effects from heating near the ground. So on a sunny day...in the middle of summer with light wind (less than 5 mph) the stability class will be the max...A... which is extremely unstable. Under the same conditions in winter... the stability would be...B.

If wind speed is double under the same conditions...10 mph...stability class falls to a B in summer and C in winter. At night...clear skies and light wind will usually result in a strong surface inversion...thus the lowest class...F.

The classes are
A....extremely unstable
B...unstable
C...slightly unstable
D...neutral
E...slightly stable
F...stable
The category day is derived from the vent index.

1.) <2000..... 1
2.) 2000-3999... 2
3.) 4000-7999... 3
4.) 8000-16000 4
5.) >16000 5

Suppression: All the work of extinguishing or confining a fire beginning with its discovery.

Surface fire: Fire that burns loose debris on the surface.

Surface fuel: Fuels lying on or near the surface of the ground.

Surface trough: A narrow area of low atmospheric pressure located at the surface.

Sustained attack: Continuing fire suppression action until fire is under control.

Ten-hour fuel moisture: Moisture content of dead fuels with diameters of 1/4 and 1 inch.

Timelag: Time needed under specified conditions for a fuel particle to lose about 63 percent of the difference between its initial moisture content and its equilibrium moisture content.

Torching: The burning of the foliage of a single tree or a small group of trees from the bottom up.

Total fuel: All plant material both living and dead that can burn in a worst case situation.

Transport winds: The mean wind speed and direction of all winds between the surface and mixing height.

Transport winds at 500 meters: The forecast transport winds at the time in which the mixing height is expected to reach 500 meters.

Tropical wave: An area of disorganized convection in the tropics.

Twenty-foot wind: Wind observed at regular RAWS/FTS observation stations, typically forecast by meteorologists, and influenced somewhat by vegetation and terrain. These winds are evaluated at either 20 feet above the surface or 20 feet above a solid layer of vegetation.

Uniform fuels: Fuels distributed continuously, thereby providing a continuous path for fire to spread.

User agency: Any agency that relies on fire weather forecast products from the National Weather Service.

Weather Information and Management System (WIMS): An interactive computer system designed to accommodate the weather information needs of federal and state natural resource management agencies.

Wetting rain: A widespread rain that over an extended period of time significantly reduces fire danger. Usually greater than 0.10 inches.

Wildfire: An unplanned wildland fire requiring suppression action or other action according to agency policy.

Wildland: An area in which development is essentially non-existent.

Wind-driven wildland fire: A wildland fire that is controlled by a strong consistent wind.

Appendix V
Examples:
Red Flag Warnings/Fire Weather Watch

WFO Specific

WFO Memphis, Tennessee: <to be edited>

WFO Jackson, Mississippi:

URGENT - FIRE WEATHER MESSAGE
NATIONAL WEATHER SERVICE JACKSON MS
324 PM CDT TUE MAR 25 2014

...DANGEROUS FIRE WEATHER CONDITIONS EXPECTED THROUGH THE REST OF THIS AFTERNOON FOR A LARGE PORTION OF CENTRAL AND SOUTHERN MISSISSIPPI...

.GUSTY NORTHWEST WINDS WILL COMBINE WITH LOW AFTERNOON HUMIDITY LEVELS RANGING FROM 20 TO 25 PERCENT. DORMANT AND DRY VEGETATION IS IN PLACE TO CREATE DANGEROUS FIRE WEATHER CONDITIONS.

MSZ018-019-025>066-072>074-260000-
/O.CON.KJAN.FW.W.0004.000000T0000Z-140326T0000Z/
BOLIVAR-SUNFLOWER-LEFLORE-GRENADA-CARROLL-MONTGOMERY-WEBSTER-CLAY-
LOWNDES-CHOCTAW-OKTIBBEHA-WASHINGTON-HUMPHREYS-HOLMES-ATTALA-
WINSTON-NOXUBEE-ISSAQUENA-SHARKEY-YAZOO-MADISON MS-LEAKE-NESHOBA-
KEMPER-WARREN-HINDS-RANKIN-SCOTT-NEWTON-LAUDERDALE-CLAIBORNE-
COPIAH-SIMPSON-SMITH-JASPER-CLARKE-JEFFERSON-ADAMS-FRANKLIN MS-
LINCOLN-LAWRENCE-JEFFERSON DAVIS-COVINGTON-JONES-MARION-LAMAR-
FORREST-
324 PM CDT TUE MAR 25 2014

...RED FLAG WARNING REMAINS IN EFFECT UNTIL 7 PM CDT THIS EVENING FOR FOR FIRE WEATHER ZONES 029... 030...031...032...033...037... 038...039...044...045...046...050... 051...052...055...056...

057...058...063...064...065...066...072... 073 AND 074...

* AFFECTED AREA...FIRE WEATHER ZONES 029...030...031...032...
  033...037...038...039...044...045...046...050...051...052...
  055...056...057...058...063...064...065...066...072...073 AND
  074.

* WIND...SUSTAINED NW WINDS OF 15 TO 20 MPH WITH GUSTS BETWEEN
  25 AND 30 MPH WILL BE POSSIBLE THIS AFTERNOON.

* HUMIDITY...VALUES BETWEEN 20 AND 25 PERCENT ARE EXPECTED THIS
  AFTERNOON.

 * IMPACTS...ANY FIRES THAT DEVELOP WILL LIKELY SPREAD RAPIDLY.
  OUTDOOR BURNING IS NOT RECOMMENDED.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A RED FLAG WARNING MEANS THAT CRITICAL FIRE WEATHER CONDITIONS
ARE EITHER OCCURRING NOW...OR WILL SHORTLY. A COMBINATION OF
STRONG WINDS...LOW RELATIVE HUMIDITY...AND WARM TEMPERATURES WILL
CREATE EXPLOSIVE FIRE GROWTH POTENTIAL.

&&

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WFO New Orleans, Louisiana:

URGENT - FIRE WEATHER MESSAGE
NATIONAL WEATHER SERVICE NEW ORLEANS LA
1139 AM CDT TUE MAR 25 2014

...WINDY AND DRY CONDITIONS EXPECTED TODAY...

.STRONG NORTH WINDS OF 15 TO 20 MPH WITH HIGHER GUSTS OF
AROUND 30 MPH AND VERY LOW RELATIVE HUMIDITY VALUES OF
AROUND 25 PERCENT WILL RESULT IN HIGH FIRE DANGER LEVELS
FOR TODAY.

MSZ068>071-077-080>082-260000-
/O.NEW.KLIX.FW.W.0003.140325T1639Z-140326T0000Z/
WILKINSON-AMITE-PIKE-WALTHALL-PEARL RIVER-HANCOCK-HARRISON-
JACKSON-
1139 AM CDT TUE MAR 25 2014

...RED FLAG WARNING IN EFFECT UNTIL 7 PM CDT THIS EVENING FOR DRY AND WINDY CONDITIONS...

THE NATIONAL WEATHER SERVICE IN NEW ORLEANS HAS ISSUED A RED FLAG WARNING...WHICH IS IN EFFECT UNTIL 7 PM CDT THIS EVENING.

* AFFECTED AREA...IN MISSISSIPPI...FIRE WEATHER ZONE 068 WILKINSON...FIRE WEATHER ZONE 069 AMITE...FIRE WEATHER ZONE

-45-070 PIKE...FIRE WEATHER ZONE 071 WALTHALL...FIRE WEATHER ZONE 077 PEARL RIVER...FIRE WEATHER ZONE 080 HANCOCK...FIRE WEATHER ZONE 081 HARRISON...FIRE WEATHER ZONE 082 JACKSON.

* WIND...NORTHWEST TO NORTH WINDS OF 15 TO 20 MPH WITH FREQUENT HIGHER GUSTS TO AROUND 30 MPH THROUGH THE AFTERNOON HOURS.

* HUMIDITY...AROUND 25 PERCENT DURING THE AFTERNOON HOURS.

* IMPACTS...ANY FIRES THAT DEVELOP WILL LIKELY SPREAD RAPIDLY. OUTDOOR BURNING IS NOT RECOMMENDED.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A RED FLAG WARNING MEANS THAT CRITICAL FIRE WEATHER CONDITIONS ARE EITHER OCCURRING NOW...OR WILL SHORTLY. A COMBINATION OF STRONG WINDS...LOW RELATIVE HUMIDITY...AND WARM TEMPERATURES CAN CONTRIBUTE TO EXTREME FIRE BEHAVIOR.

$$

WFO Mobile, Alabama:

URGENT - FIRE WEATHER MESSAGE
NATIONAL WEATHER SERVICE MOBILE AL
100 PM CDT TUE MAR 25 2014

...RED FLAG WARNING REMAINS IN EFFECT UNTIL 6 PM CDT THIS EVENING FOR SOUTHEAST MISSISSIPPI DUE TO MARGINALLY LONG DURATION OF CRITICALLY LOW RELATIVE HUMIDITY AND STRONG NORTHWEST WINDS...

...FIRE WEATHER WATCH IN EFFECT WEDNESDAY FOR SOUTHEAST MISSISSIPPI HAS BEEN UPGRADED TO A RED FLAG WARNING DUE TO A MARGINALLY LONG DURATION OF CRITICALLY LOW RELATIVE HUMIDITY AND STRONG NORTHWEST WINDS...

.STRONG HIGH PRESSURE WILL CONTINUE BUILDING INTO THE REGION FROM THE NORTHWEST

THROUGH WEDNESDAY...RESULTING IN CRITICALLY LOW DAYTIME HUMIDITY AND STRONG NORTHWESTERLY MIXED LAYER WIND FLOW.

MSZ067-075-076-078-079-261230-
/O.NEW.KMOB.FW.W.0015.140326T1700Z-140326T2300Z/
/O.CON.KMOB.FW.W.0014.000000T0000Z-140325T2300Z/
WAYNE-PERRY-GREENE-STONE-GEORGE-
100 PM CDT TUE MAR 25 2014

...RED FLAG WARNING REMAINS IN EFFECT UNTIL 6 PM CDT THIS EVENING FOR SOUTHEAST MISSISSIPPI DUE TO MARGINALLY LONG DURATION OF CRITICALLY LOW RELATIVE HUMIDITY AND STRONG NORTHWEST WINDS...

...RED FLAG WARNING IN EFFECT FROM NOON TO 6 PM CDT WEDNESDAY FOR SOUTHEAST MISSISSIPPI AND SOUTHWEST ALABAMA DUE TO EXPECTED LONG DURATION OF CRITICALLY LOW RELATIVE HUMIDITY AND STRONG NORTHWEST WINDS...

* AFFECTED AREA...FIRE WEATHER ZONES 067...075...076...078 AND 079.

* RELATIVE HUMIDITY: 19 TO 24 PERCENT.

* WINDS: NORTHWEST 15 TO 25 MPH WITH FREQUENT GUSTS TO 30 MPH.

* DISPERSIONS: 90 TO 95.

* IMPACTS: ANY FIRES THAT DEVELOP WILL LIKELY SPREAD RAPIDLY.
  OUTDOOR BURNING IS NOT RECOMMENDED.

PRECAUTIONARY/PREPAREDNESS ACTIONS...

A RED FLAG WARNING MEANS THAT CRITICAL FIRE WEATHER CONDITIONS ARE EITHER
OCCURRING NOW...OR WILL SHORTLY. A COMBINATION OF LOW RELATIVE HUMIDITY...AND
DRY FUELS AND STRONG NORTHWEST WINDS CAN CONTRIBUTE TO EXTREME FIRE BEHAVIOR.

&&

Appendix VI Fire Weather Forecast Examples

WFO Specific

WFO Memphis: Issued twice a day with updates issued as needed.

MSZ002>006-009-013>017-022>024-021115-
ALCORN-BENTON MS-CALHOUN-CHICKASAW-ITAWAMBA-LAFAYETTE-LEE MS-
MARSHALL-MONROE-PONTOTOC-PRENTISS-TIPPAH-TISHOMINGO-UNION-
INCLUDING...NORTH MISSISSIPPI PORTION NATCHEZ TRACE PARKWAY...
NORTH UNIT HOLLY SPRINGS NATIONAL FOREST...
NORTH UNIT TOMBIGBEE NATIONAL FOREST...NORTHEAST MISSISSIPPI
253 PM CDT FRI AUG 1 2014

	TONIGHT	SAT	SAT NIGHT	SUN
CLOUD COVER	PCLDY	PCLDY	PCLDY	PCLDY
PRECIP CHANCE (%)	20	30	20	20
PRECIP TYPE	TSTMS	TSTMS	TSTMS	TSTMS
PRECIP AMOUNT (IN)	0.01	0.00	0.00	0.00
PRECIP DUR (HRS)	1			
PRECIP BEGINS	6 PM			

PRECIP ENDS	6 AM			
TEMP (24H TREND)	67 (0)	88 (+4)	68	90
RH % (24H TREND)	88 (-6)	43 (-4)	92	44
AM 20 FT WIND (MPH)		LGT/VAR		LGT/VAR
PM 20 FT WIND (MPH)	LGT/VAR	NE 2-6	LGT/VAR	NE 4-8
MIXING HGT (M-AGL)		1841		2562
MIXING HGT (FT-AGL)		6041		8404
MIXING HGT (M-MSL)		1965		2685
MIXING HGT (FT-MSL)		6447		8810
TRANSPORT WND (M/S)		E 5		NE 5
TRANSPORT WND (MPH)		E 10		NE 10
VENT INDEX (M2/S)		9825		13425
CATEGORY DAY		4		4
500M MIX HGT TEMP (F)		81		82
500M TSPT WIND (M/S)		E 4		NE 4
500M TSPT WIND (MPH)		E 8		NE 8
DISPERSION INDEX	6	36	7	40
LAL	3	3	3	2

LASI	3	3	3	3
STABILITY	F	B	F	B
STAGNATION INDEX	2	3	3	3

REMARKS...NONE.

.FORECAST FOR DAYS 3 THROUGH 7...

.SUNDAY NIGHT...MOSTLY CLEAR. LOWS IN THE MID 60S. NORTHEAST WINDS AROUND 5 MPH.
.MONDAY...MOSTLY SUNNY. HIGHS AROUND 90. MINIMUM RH 41 PERCENT. NORTHEAST WINDS AROUND 5 MPH.
.MONDAY NIGHT...PARTLY CLOUDY. LOWS IN THE UPPER 60S. NORTHEAST WINDS AROUND 5 MPH.
.TUESDAY...MOSTLY SUNNY. HIGHS IN THE LOWER 90S. MINIMUM RH 40 PERCENT. NORTH WINDS AROUND 5 MPH.
.TUESDAY NIGHT...MOSTLY CLEAR. LOWS IN THE MID 60S. NORTHEAST WINDS AROUND 5 MPH.
.WEDNESDAY...MOSTLY SUNNY. HIGHS IN THE LOWER 90S. MINIMUM RH 40 PERCENT. EAST WINDS AROUND 5 MPH BECOMING NORTHWEST IN THE AFTERNOON.
.WEDNESDAY NIGHT...PARTLY CLOUDY. LOWS AROUND 70. NORTHEAST WINDS AROUND 5 MPH.
.THURSDAY...A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS. PARTLY

SUNNY. HIGHS IN THE LOWER 90S. MINIMUM RH 45 PERCENT. EAST WINDS
AROUND 5 MPH BECOMING SOUTHWEST IN THE AFTERNOON.
.THURSDAY NIGHT...A SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS.
MOSTLY CLOUDY. LOWS AROUND 70. SOUTH WINDS AROUND 5 MPH.
.FRIDAY...A CHANCE OF SHOWERS AND THUNDERSTORMS. PARTLY SUNNY.
HIGHS IN THE UPPER 70S. MINIMUM RH 45 PERCENT. SOUTH WINDS AROUND
5 MPH.

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WFO Jackson: **Issued twice a day with updates issued as needed.**

FORESTRY FIRE WEATHER FORECAST
NATIONAL WEATHER SERVICE JACKSON MS
800 AM CDT SAT JUL 26 2014

SYNOPSIS...(MENTION FOG POTENTIAL FOR THE NEXT FEW DAYS) DRY AND WARM CONDITIONS WILL PREVAIL THROUGH SUNDAY. A COLD FRONT WILL MOVE ACROSS THE REGION ON MONDAY AND THIS WILL BRING INCREASING CHANCES FOR SHOWERS AND THUNDERSTORMS. COOLER AND DRIER CONDITIONS WILL PREVAIL ON TUESDAY AND CONTINUE THROUGH MUCH OF THE WEEK. PATCHY LIGHT MORNING FOG IS POSSIBLE THIS MORNING AND SUNDAY MORNING..

MSZ040>044-047>050-021015-
ISSAQUENA-SHARKEY-YAZOO-MADISON MS-LEAKE-WARREN-HINDS-RANKIN-
SCOTT-

	TODAY	TONIGHT	TOMORROW
CLOUD COVER	PTCLDY	CLEAR	SUNNY
PRECIP TYPE	NON	NONE	NONE
CHANCE PRECIP (%)	0	0	0
TEMP (24H TREND)	93 (0)	72 (+2)	95
RH % (24H TREND)	45 (+4)	100 (0)	44
20FT WND/AM/(MPH)	SW 4		SW 4
20FT WND/PM(MPH)	SW 5	S 3	SW 6
RAIN DURATN:(HRS)	1	0	1
RAIN AMOUNTS:(INS)	0.09	0.00	0.08
MIXING HEIGHT (M AGL)	1560		2078
MIXING HEIGHT (FT AGL)	5117		6818
TRANSPORT WND (M/S)	SW 4		SW 5
TRANSPORT WND (MPH)	SW 8		SW 10
VENT INDEX (METRIC)	6240		10390
VENT INDEX (ENGLISH)	40936		68180
STAG INDEX	3	3	3
CATEGORY DAY	4		5

STABILITY	A-B	F	A-B
WINDSHIFTS:	NONE	NONE	NONE
PRECIP BEGIN	LATE MRNG		LATE MRNG
PRECIP END	LATE AFTN		EARLY EVENG
MAXIMUM LVORI	2	2	2
DISPERSION INDEX (%)	30	5	40
MAXIMUM FIRE DANGER	3		4

REMARKS

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.FORECAST FOR .DAYS 3 THROUGH 7.

.MONDAY...PARTLY CLOUDY. A 20 PERCENT CHANCE OF SHOWERS AND THUNDERSTORMS. LOWS IN THE LOWER 70S. HIGHS IN THE LOWER 90S. NORTH WINDS UP TO 10 MPH..
.TUESDAY…MOSTLY CLEAR. LOWS IN THE UPPER 60S. HIGHS AROUND 90. NORTH WINDS UP TO 10 MPH.
.WEDNESDAY…CLEAR. LOWS IN THE MID 60S. HIGHS AROUND 90. NORTH WINDS UP TO 5 MPH.
.THURSDAY…MOSTLY CLOUDY. LOWS IN THE MID 60S. HIGHS AROUND 90. NORTH WINDS UP TO 5 MPH.
.FRIDAY…MOSTLY CLOUDY. LOWS IN THE MID 60S. HIGHS IN THE LOWER 90S. NORTHWEST WINDS UP TO 5 MPH.

Forecast Indices Defintions:
Maximum Lvori...Low Visibility Occurrence Risk Index(LVORI)…Based on a scale from 0 (lowest) to 10 (highest) that indicates the risk for fog which could combine with smoke to produce very low visibilities.

Dispersion Index: Ranges from single digits(poor) to >100 (very good dispersion)

WFO New Orleans: Issued twice a day with updates issued as needed.

FIRE WEATHER PLANNING FORECAST FOR S MS AND SE LA
NATIONAL WEATHER SERVICE NEW ORLEANS LA
427 AM CDT SAT AUG 2 2014

RED FLAG...NONE

DISCUSSION...A FRONTAL BOUNDARY HAS MOVED INTO THE AREA AND STALLED.
SHOWERS ARE POSSIBLE NORTH OF THE BOUNDARY AS IT SLOWELY MOVES NORTH

OVER THE NEXT FEW DAYS. HIGH PRESSURE WILL BUILD INTO THE AREA MID WEEK.

MSZ068>071-022230-
WILKINSON-AMITE-PIKE-WALTHALL-
INCLUDING THE CITIES OF...CENTREVILLE...WOODVILLE...GLOSTER...
.LIBERTY...CROSBY...MCCOMB...TYLERTOWN
427 AM CDT SAT AUG 2 2014

.RED FLAG...NONE.

	TODAY	TONIGHT	SUN
CLOUD COVER	MCLDY	PCLDY	PCLDY
PRECIP TYPE	TSTMS	SHOWERS	TSTMS
CHANCE PRECIP (%)	40	40	60

TEMP	86	70	87
RH %	50	97	57
20FTWND/AM(MPH)	LGT/VAR		LGT/VAR
20FTWND/PM(MPH)	LGT/VAR	NE 1-5	LGT/VAR
AVG PCPN AMT (IN)	0.26	0.07	0.36
PRECIP DURATION (HR)	2	2	5
MIXING HGT(M-AGL/MSL)	1638		1227
TRANSPORT WND (M/S)	S 6		S 5
VENT RATE (M**2/S)	9828		6135
CATEGORY DAY	4		3
SILT/ 500 MLT (F)	78		78
MRNG MXG HGT (M)	500		500
STAGNATION INDEX	1	1	1
STABILITY CLASS	B	F	B
DISPERSION INDEX	59	3	46

FOG POTENTIAL AND OTHER REMARKS...SOME EARLY MORNING FOG IS
POSSIBLE.

.FORECAST FOR DAYS 3 THROUGH 7...

.SUNDAY NIGHT...PARTLY CLOUDY WITH CHANCE OF SHOWERS AND ISOLATED
THUNDERSTORMS. LOWS AROUND 70. NORTHEAST WINDS AROUND 5 MPH.
MAXIMUM RH 93 PERCENT.
.MONDAY...PARTLY CLOUDY WITH A 50 PERCENT CHANCE OF SHOWERS AND

THUNDERSTORMS. HIGHS IN THE UPPER 80S. NORTHEAST WINDS AROUND
5 MPH. MINIMUM RH 58 PERCENT.
.MONDAY NIGHT...PARTLY CLOUDY WITH A 20 PERCENT CHANCE OF SHOWERS
AND THUNDERSTORMS. LOWS AROUND 70. NORTHEAST WINDS AROUND 5 MPH.
MAXIMUM RH 92 PERCENT.
.TUESDAY...PARTLY CLOUDY WITH A 40 PERCENT CHANCE OF SHOWERS AND
THUNDERSTORMS. HIGHS IN THE UPPER 80S. NORTHEAST WINDS AROUND
5 MPH SHIFTING TO THE EAST IN THE AFTERNOON. MINIMUM RH
55 PERCENT.
.TUESDAY NIGHT...PARTLY CLOUDY WITH A 20 PERCENT CHANCE OF
SHOWERS AND THUNDERSTORMS. LOWS AROUND 70. SOUTHWEST WINDS AROUND
5 MPH. MAXIMUM RH 94 PERCENT.
.WEDNESDAY...PARTLY CLOUDY WITH A 30 PERCENT CHANCE OF SHOWERS
AND THUNDERSTORMS. HIGHS IN THE UPPER 80S. SOUTHWEST WINDS AROUND
5 MPH. MINIMUM RH 57 PERCENT.

.WEDNESDAY NIGHT...PARTLY CLOUDY WITH A 20 PERCENT CHANCE OF
SHOWERS AND THUNDERSTORMS. LOWS AROUND 70. SOUTHWEST WINDS AROUND
5 MPH. MAXIMUM RH 98 PERCENT.
.THURSDAY...PARTLY CLOUDY WITH A 40 PERCENT CHANCE OF SHOWERS AND
THUNDERSTORMS. HIGHS IN THE UPPER 80S. SOUTHWEST WINDS AROUND
5 MPH. MINIMUM RH 60 PERCENT.
.THURSDAY NIGHT...PARTLY CLOUDY. LOWS IN THE LOWER 70S. SOUTH
WINDS AROUND 5 MPH. MAXIMUM RH 99 PERCENT.
.FRIDAY...PARTLY CLOUDY WITH A 30 PERCENT CHANCE OF SHOWERS AND
THUNDERSTORMS. HIGHS IN THE UPPER 80S. SOUTH WINDS AROUND 5 MPH.
MINIMUM RH 59 PERCENT.

WFO Mobile: Issued twice a day with updates issued as needed.

FIRE WEATHER PLANNING FORECAST FOR INLAND SOUTHEAST MISSISSIPPI...
SOUTHWEST ALABAMA AND THE EXTREME WESTERN FLORIDA PANHANDLE
NATIONAL WEATHER SERVICE MOBILE AL
230 PM CDT TUE OCT 28 2014

.DISCUSSION...A COLD FRONT ADVANCING FROM THE PLAINS WILL MOVE THROUGH
THE AREA ON WEDNESDAY AND USHER DRIER AND COOLER AIR INTO THE REGION.
WHILE AFTERNOON RELATIVE HUMIDITY VALUES WILL REMAIN WELL ABOVE CRITICAL
LEVELS THROUGH WEDNESDAY...MUCH DRIER CONDITIONS ARE EXPECTED FOR
THURSDAY AND FRIDAY. AFTERNOON RELATIVE HUMIDITY VALUES WILL DROP TO
NEAR OR JUST BELOW CRITICAL LEVELS OVER SOUTHWEST AND SOUTH CENTRAL

ALABAMA AND THE NORTHWEST FLORIDA PANHANDLE ON THURSDAY BUT OTHER CRITERIA ARE TOO MARGINAL AT THIS TIME FOR A FIRE WEATHER WATCH.

FOG POTENTIAL AND OTHER REMARKS...PATCHY FOG IS EXPECTED TO DEVELOP TONIGHT WITH SOME LOCATIONS POSSIBLY DENSE WITH VISIBILITIES DOWN TO NEAR A HALF MILE. FOG DEVELOPMENT IS NOT EXPECTED WEDNESDAY NIGHT OR THURSDAY NIGHT.

MSZ078-079-290815-
STONE-GEORGE-
230 PM CDT TUE OCT 28 2014

	TONIGHT	WED	WED NIGHT	THU

CLOUD COVER	MCLDY	MCLDY	MCLDY	CLEAR
CHANCE PRECIP (%)	20	60	0	0
PRECIP TYPE	SHOWERS	TSTMS	NONE	NONE
TEMP	64	81	50	74
RH %	100	62	89	29
20FT WND MPH(AM)		NW 1-5		N 5-9
20FT WND MPH(PM)	S 1-5	N 7-11	N 4-8	N 6-10
PRECIP DURATION	1	9		
PRECIP AMOUNTS	0.02	0.11	0.00	0.00
MIXING HGT (FT-AGL)	300	4500	400	3500
MIXING HGT (M-AGL)	91	1372	122	1067
TRANSPORT WND (MPH)	SW 2	NW 9	N 8	N 12
TRANSPORT WND (M/S)	SW 1	NW 4	N 4	N 5
DISPERSION INDEX	1	36	4	45
STAG INDEX	3	2	2	3
STABILITY CLASS	F	B	F	B
MAX LVORI	10		5	
LAL	1	3	1	1
PRECIP BEGINS	1 AM	CONTINUING		
PRECIP ENDS	CONTINUING	7 PM		

.EXTENDED...
.THURSDAY NIGHT...MOSTLY CLEAR. LOWS IN THE MID 40S. NORTH WINDS AROUND 5 MPH. MAXIMUM RH 78 PERCENT.
.FRIDAY...SUNNY. HIGHS IN THE MID 70S. NORTHWEST WINDS 5 TO 10 MPH. MINIMUM RH 33 PERCENT.

.FRIDAY NIGHT...MOSTLY CLEAR. LOWS IN THE MID 40S. NORTH WINDS 5 TO 10 MPH. MAXIMUM RH 76 PERCENT.
.SATURDAY...SUNNY. HIGHS IN THE MID 60S. NORTH WINDS 5 TO 10 MPH. MINIMUM RH 29 PERCENT.
.SATURDAY NIGHT...MOSTLY CLEAR. LOWS AROUND 40. NORTHEAST WINDS AROUND 5 MPH. MAXIMUM RH 76 PERCENT.
.SUNDAY...MOSTLY SUNNY. HIGHS IN THE LOWER 70S. EAST WINDS 5 TO 10 MPH. MINIMUM RH 37 PERCENT.
.SUNDAY NIGHT...PARTLY CLOUDY. LOWS IN THE UPPER 40S. EAST WINDS AROUND 5 MPH. MAXIMUM RH 97 PERCENT.
.MONDAY...MOSTLY SUNNY. HIGHS IN THE MID 70S. SOUTHEAST WINDS 5 TO 10 MPH. MINIMUM RH 54 PERCENT.
.MONDAY NIGHT...PARTLY CLOUDY. LOWS IN THE UPPER 50S. SOUTHEAST WINDS 5 TO 10 MPH. MAXIMUM RH 97 PERCENT.

.TUESDAY...PARTLY SUNNY. SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS. HIGHS IN THE MID 70S. SOUTHEAST WINDS 5 TO 10 MPH. MINIMUM RH 61 PERCENT.

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MSZ067-075-076-290815-
WAYNE-PERRY-GREENE-
230 PM CDT TUE OCT 28 2014

	TONIGHT	WED	WED NIGHT	THU
CLOUD COVER	MCLDY	MCLDY	PCLDY	CLEAR
CHANCE PRECIP (%)	20	60	0	0
PRECIP TYPE	SHOWERS	TSTMS	NONE	NONE
TEMP	62	79	45	73
RH %	100	62	87	27
20FT WND MPH(AM)		W 1-5		N 3-7
20FT WND MPH(PM)	S 1-5	N 7-11	N 3-7	N 4-8
PRECIP DURATION	1	9		
PRECIP AMOUNTS	0.03	0.08	0.00	0.00
MIXING HGT (FT-AGL)	300	4000	300	3800
MIXING HGT (M-AGL)	91	1219	91	1158
TRANSPORT WND (MPH)	S 6	NW 9	N 6	N 12
TRANSPORT WND (M/S)	S 3	NW 4	N 3	N 5
DISPERSION INDEX	1	34	3	55

STAG INDEX	3	2	2	3
STABILITY CLASS	F	B	F	B
MAX LVORI	10		6	
LAL	1	3	1	1
PRECIP BEGINS	1 AM	CONTINUING		
PRECIP ENDS	CONTINUING	7 PM		

.EXTENDED...
.THURSDAY NIGHT...MOSTLY CLEAR. LOWS IN THE LOWER 40S. NORTHWEST WINDS UP TO 5 MPH. MAXIMUM RH 83 PERCENT.
.FRIDAY...SUNNY. HIGHS IN THE MID 70S. NORTHWEST WINDS 5 TO 10 MPH. MINIMUM RH 34 PERCENT.
.FRIDAY NIGHT...MOSTLY CLEAR. LOWS IN THE MID 40S. NORTH WINDS 5 TO 10 MPH. MAXIMUM RH 75 PERCENT.

.SATURDAY...SUNNY. HIGHS IN THE MID 60S. NORTHEAST WINDS 5 TO 10 MPH. MINIMUM RH 27 PERCENT.
.SATURDAY NIGHT...MOSTLY CLEAR. LOWS IN THE UPPER 30S. NORTHEAST WINDS AROUND 5 MPH. MAXIMUM RH 72 PERCENT.
.SUNDAY...MOSTLY SUNNY. HIGHS IN THE LOWER 70S. EAST WINDS AROUND 5 MPH. MINIMUM RH 31 PERCENT.
.SUNDAY NIGHT...PARTLY CLOUDY. LOWS AROUND 50. EAST WINDS AROUND 5 MPH. MAXIMUM RH 78 PERCENT.
.MONDAY...MOSTLY SUNNY. HIGHS IN THE MID 70S. SOUTHEAST WINDS 5 TO 10 MPH. MINIMUM RH 48 PERCENT.
.MONDAY NIGHT...PARTLY CLOUDY. LOWS IN THE MID 50S. SOUTHEAST WINDS 5 TO 10 MPH. MAXIMUM RH 93 PERCENT.
.TUESDAY...PARTLY SUNNY. SLIGHT CHANCE OF SHOWERS AND THUNDERSTORMS. HIGHS IN THE MID 70S. SOUTHEAST WINDS AROUND 5 MPH. MINIMUM RH 58 PERCENT.

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Appendix VII

Fire Weather NFDRS Forecast Examples:

WFO Specific

WFO Memphis:**Issued once a day**

MEG 012036FWMMEG

FCST,220202,140802,13,2,87,44,3,2,ENE,04,M,87,67,87,44,0,0,N
FCST,222401,140802,13,2,88,49,3,3,NE,04,M,88,66,96,43,0,0,N
FCST,220601,140802,13,2,88,42,3,3,ENE,03,M,88,66,88,42,0,0,N
FCST,222101,140802,13,2,88,47,3,2,NE,04,M,88,67,90,47,0,0,N
FCST,032801,140802,13,2,87,44,2,2,ENE,05,M,87,65,96,44,0,0,N
FCST,034503,140802,13,2,87,45,3,2,NE,05,M,87,66,92,45,0,0,N
FCST,404001,140802,13,2,87,42,2,2,NNE,04,M,87,64,92,42,0,0,N
FCST,408001,140802,13,2,87,42,2,2,NE,04,M,87,65,89,42,0,0,N
FCST,403801,140802,13,2,86,45,2,2,NE,05,M,86,65,94,45,0,0,N
FCST,401801,140802,13,2,87,44,2,2,NNE,04,M,87,64,94,43,0,0,N

WFO Jackson:**Issued once a day**

FNUS84 KJAN 012025
FWMJAN

FCST,226102,140802,13,2,85,53,1,2,NNE,03,,85,69,88,53,4,0,N
FCST,225502,140802,13,2,84,56,1,2,N,03,,84,69,90,56,5,0,N
FCST,223301,140802,13,2,84,58,1,2,NNE,04,,85,68,97,57,0,0,N
FCST,224403,140802,13,2,85,55,1,2,N,06,,85,68,94,55,0,0,N
FCST,227202,140802,13,2,86,52,1,2,NE,03,,86,69,88,51,4,0,N
FCST,225101,140802,13,2,86,52,1,2,N,03,,86,66,97,52,0,0,N
FCST,224101,140802,13,2,88,51,1,2,NNE,05,,88,69,88,46,0,0,N
FCST,037403,140802,13,2,84,61,1,2,NE,03,,84,66,98,60,4,0,N
FCST,226502,140802,13,2,85,54,1,2,N,03,,85,67,93,54,0,0,N
FCST,223501,140802,13,2,86,53,1,2,NNE,03,,86,67,92,53,0,0,N
FCST,224201,140802,13,2,84,60,1,2,NNE,04,,84,68,98,60,0,0,N
FCST,225301,140802,13,2,88,51,1,2,NNE,04,,88,68,92,43,0,0,N
FCST,224601,140802,13,2,87,51,1,2,N,04,,87,67,95,47,0,0,N

WFO New Orleans:**Issued once a day**

FNUS84 KLIX 011920
FWMLIX

FCST,168541,140802,13,2,88,55,3,2,WNW,01,M,88,73,88,51,0,0,N
FCST,228002,140802,13,2,89,45,3,2,W,01,M,90,72,87,45,0,0,N

FCST,228202,140802,13,2,89,50,2,2,SW,02,M,90,70,93,48,0,0,N
FCST,228290,140802,13,2,90,46,2,2,WSW,02,M,90,72,87,46,0,0,N
FCST,228204,140802,13,2,87,56,2,2,WSW,03,M,88,72,91,50,0,0,N
FCST,227001,140802,13,2,86,52,4,2,ENE,01,M,87,69,90,52,0,0,N

WFO Mobile:**Issued once a day**

FNUS84 KMOB 012000
FWMMOB

FCST,015902,140802,13,2,91,48,2,3,NE,04,M,91,69,100,40,0,0,Y
FCST,016703,140802,13,2,86,61,2,2,SW,05,M,86,75,88,58,0,0,N
FCST,089908,140802,13,2,91,48,2,3,ENE,03,M,91,72,92,44,0,0,N
FCST,089912,140802,13,2,91,51,2,3,E,03,M,91,70,100,42,0,0,Y
FCST,089913,140802,13,2,91,49,2,3,E,03,M,91,71,97,42,0,0,N

FCST,226702,140802,13,2,90,47,3,3,N,03,M,90,67,100,47,0,0,N
FCST,227802,140802,13,2,90,49,3,3,NNW,01,M,90,70,93,45,0,0,N
FCST,227601,140802,13,2,91,46,3,3,N,02,M,91,68,99,45,0,0,N

Appendix VIII

Fire Weather Fire Weather Matrix Forecast Example:

WFO Specific:

WFO Memphis

MONROE NFDRS SITE Point Forecast Matrix

MSZ024-131000-
MONROE NFDRS SITE-MONROE MS
33.87N 88.48W ELEV. 225 FT
318 PM CDT TUE AUG 12 2014

DATE	08/12/14	WED 08/13/14	THU 08/14/14	FRI
UTC 3HRLY	21 00 03 06 09 12 15 18	21 00 03 06 09 12 15 18	21 00 03 06 09 12	

CDT 3HRLY	16	19	22	01	04	07	10	13	16	19	22	01	04	07	10	13	16	19	22	01	04	07
MIN/MAX						63				87				61				89				63
TEMP	87	84	74	69	66	64	78	86	86	83	73	68	65	62	77	86	88	83	72	68	66	64
DEWPT	66	68	68	65	63	62	61	58	56	59	62	61	60	59	62	59	57	60	60	61	61	61
MAX/MIN RH						94				36				91				36				91
RH	50	60	84	86	89	93	56	39	36	44	68	78	84	90	58	41	36	46	66	78	86	91
WIND DIR	NW	N	N	N	N	N	NE	N	N	N	N	N	N	N	NE	N	N	N	NE	NE	NE	NE
WIND SPD	6	5	2	2	2	2	5	5	5	3	1	1	1	1	2	4	5	3	3	3	3	2
CLOUDS	SC	FW	FW	FW	FW	FW	FW	FW	FW	CL	CL	CL	CL	FW	FW	FW	FW	FW	FW	FW	FW	SC
CLOUDS(%)	40	14	14	14	14	20	20	20	20	4	4	4	20	20	20	20	24	24	24	24	24	31

POP 12HR						0				0				0				0				0
QPF 12HR						0				0				0				0				0
RAIN SHWRS	IS																					
TSTMS	IS																					

OBVIS			PF	PF				PF	PF				PF	PF			
MIXHGT M AGL	792	224	1523	1588	973	4	1587	1638	1017	3							
MIXHGT FT AGL	2598	736	4998	5209	3193	13	5206	5373	3336	10							
MIXHGT M MSL	858	290	1589	1654	1039	67	1654	1704	1083	69							
MIXHGT FT MSL	2814	953	5214	5425	3409	221	5426	5590	3553	226							
TRANSWIND DIR	N	NE	N	N	N	N	NE	NE	N	NE							
TWIND SPD M/S	5	4	4	3	2	1	1	1	1	1							
TWIND SPD MPH	12	9	9	8	4	2	3	3	2	2							
VENT INDEX		4290		6616		2946		3408		1536							
CATEGORY DAY		2		3		2		2		1							
500M MIXHGT T	82	78	77	82	80	79	79	83	83	81							
500M TWND DIR	N	NE	NE	N	N	NE	NE	N	NE	E							
500M TWND M/S	5	6	3	3	5	4	1	1	3	4							
500M TWND MPH	11	14	8	6	11	10	3	3	8	9							
DISPERSION	7	8	28	21	2	2	12	10	1	2							
LAL	1	1	1	1	1	1	1	1	1	1							
LASI	4	5	5	6	5	5	5	4	4	4							
STABILITY	F	E	B	C	F	E	A	C	F	E							
STAG INDEX		3		3		3		3		3							
DATE	08/15	SAT	08/16/14		SUN	08/17/14		MON	08/18/14		TUE	08/19/14					
UTC 6HRLY	18	00	06	12	18	00	06	12	18	00	06	12	18	00	06	12	18	00				

CDT 6HRLY	13	19	01	07	13	19	01	07	13	19	01	07	13	19	01	07	13	19		
MAX/MIN			91		65		91		70		92		73		90		73		92	
TEMP	87	85	70	66	86	85	74	71	88	87	76	74	88	86	77	74	89	88		
DEWPT	63	64	64	64	65	65	67	68	70	71	71	71	72	72	72	73	72	71		
MIN/MAX RH			41		93		43		91		50		91		56		96		53	
RH	45	49	81	93	49	51	78	91	55	59	86	91	59	63	87	96	56	58		
WIND DIR		NW		E		SW		SW		SW		SW		SW		SW		SW		

WFO Jackson:

ZONE FIRE WEATHER MATRIX
NATIONAL WEATHER SERVICE JACKSON MS
419 AM CDT SAT AUG 2 2014

MSZ060-030030-
ADAMS-
419 AM CDT SAT AUG 2 2014

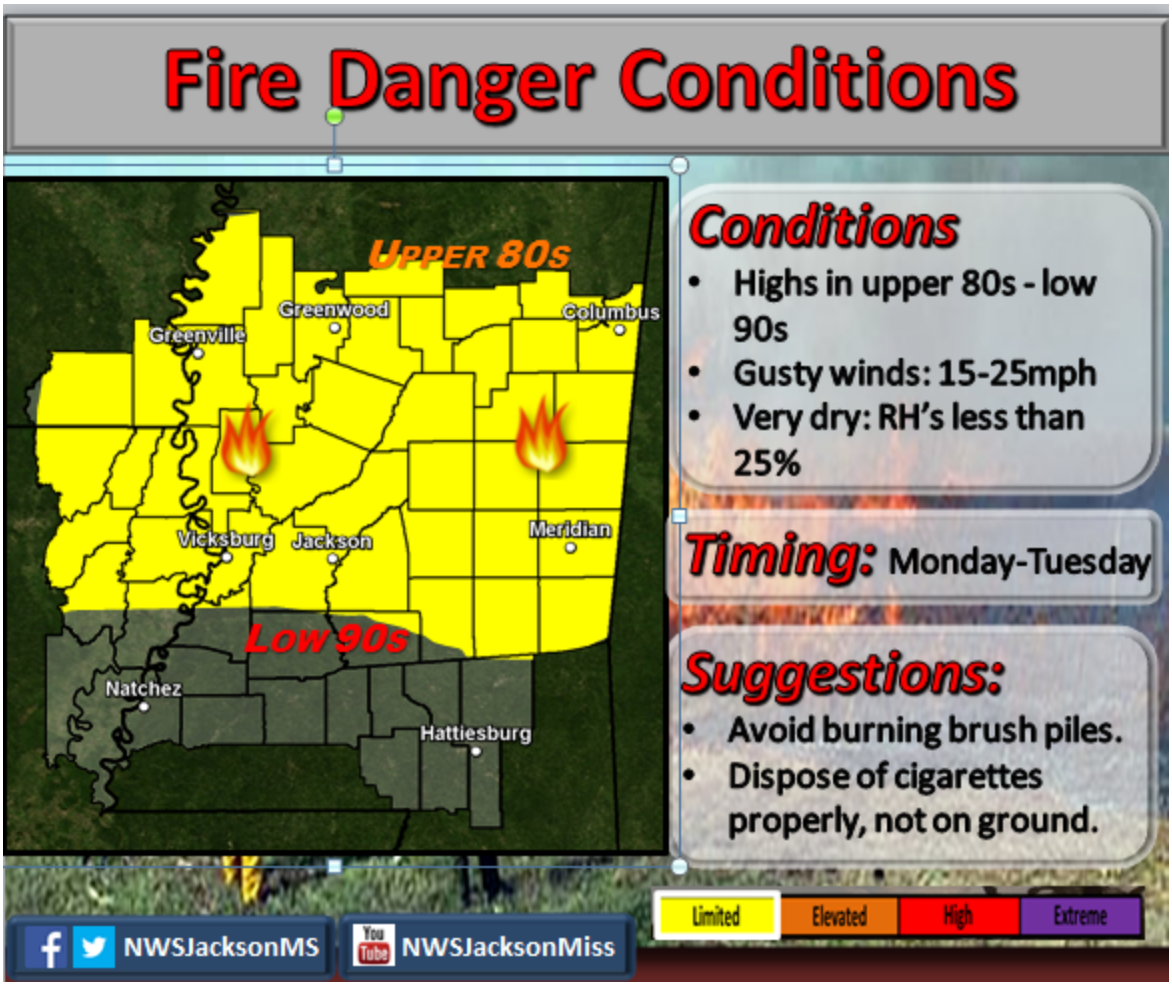
DATE	SAT 08/02/14										SUN 08/03/14									
CDT 2HRLY	04	06	08	10	12	14	16	18	20	22	00	02	04	06	08	10	12	14	16	
SKY	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	MC	
WEATHER COV	SC	CH	CH	CH	CH	CH	CH	SC	SC	SC	SC	SC	SC	CH	CH	CH	CH	CH		
WEATHER TYPE	RW	RW	TS	TS	TS	TS	TS	TS	TS	TS	RW	RW	RW	TS	TS	TS	TS	TS	TS	
TEMP	72	75	79	84	85	85	82	79	76	74	73	72	71	73	78	84	85	86	85	
RH	93	87	77	63	62	63	69	76	83	87	89	90	93	88	81	66	65	63	62	
20FT DIR	SE	E	NE	NE	NE	NE	NE	NE	E	E	E	NE	NE	NE	E	NE	NE	NE	N	
20FT SPD	2	5	5	6	6	6	6	5	2	1	1	1	2	5	6	7	8	8	9	
20FT GUST	2	6	7	8	9	9	9	7	2	1	1	1	2	6	8	9	12	12	10	
MIX HGT (HFT)	4	5	14	44	63	58	24	3	3	3	3	3	2	6	19	47	66	62	51	
MIX HGT (HM)	1	1	4	13	19	17	7	0	1	1	1	0	0	1	6	14	20	19	50	
TRAN DIR	SE	SE	S	SE	SE	E	E	E	E	E	E	E	NE	E	E	E	E	E	E	
TRAN SP (MPH)	10	10	9	8	8	10	11	11	9	8	8	6	6	9	12	11	10	9	8	
TRAN SP (M/S)	4	4	4	3	3	4	5	5	4	3	3	3	3	4	5	5	4	4	4	
LVORI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
FWDI	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	

$$

Appendix IX

HWO Fireweather Related and Graphic Example:

WFO Specific



WFO Jackson:

ARZ074-075-LAZ007>009-015-016-023>026-MSZ018-019-025>066-072>074-
131900-

-61-

ASHLEY-CHICOT-MOREHOUSE-WEST CARROLL-EAST CARROLL-RICHLAND-
MADISON LA-FRANKLIN LA-TENSAS-BOLIVAR-
SUNFLOWER-LEFLORE-GRENADA-CARROLL-MONTGOMERY-WEBSTER-CLAY-LOWNDES-CHOCTAW-
OKTIBBEHA-WASHINGTON-HUMPHREYS-HOLMES-ATTALA-WINSTON-NOXUBEE-ISSAQUENA-SHARK
EY-YAZOO-MADISON
MS-LEAKE-NESHOBA-KEMPER-WARREN-HINDS-RANKIN-SCOTT-NEWTON-LAUDERDALE-CLAIBORNE-
SIMPSON-SMITH-JASPER-CLARKE-JONES-
200 PM CDT TUE MAR 24 2014

THIS HAZARDOUS WEATHER OUTLOOK IS FOR PORTIONS OF SOUTHEAST ARKANSAS...NORTHEAST LOUISIANA...CENTRAL MISSISSIPPI...NORTH CENTRAL MISSISSIPPI.

.DAY ONE...TONIGHT AND WEDNESDAY…

FIRE WEATHER
RISK….LIMITED
TIMING REMAINDER OF TODAY THROUGH TONIGHT

THERE IS A LIMITED RISK OF FIRE DANGER CONDITIONS ACROSS MOST OF CENTRAL MISSISSIPPI...SOUTHEAST ARKANSAS AND MOST OF NORTHEAST LOUISIANA. LIMITED OPEN BURNING IS USUALLY SAFE WITH PROPER CONTAINERS AND PRECAUTIONS SHOULD BE TAKEN UNDER LIMITED FIRE DANGER CONDITIONS.

.DAYS TWO THROUGH SEVEN...WEDNESDAY NIGHT THROUGH MONDAY...

THE PROBABILITY FOR WIDESPREAD HAZARDOUS WEATHER IS LOW.

.SPOTTER CALL TO ACTION STATEMENT...
THE ACTIVATION OF STORM SPOTTERS...HAM RADIO OPERATORS...AND EMERGENCY MANAGEMENT PERSONNEL IN SUPPORT OF SEVERE WEATHER OPERATIONS IS NOT EXPECTED THROUGH NEXT MONDAY.

WFO New Orleans:

HAZARDOUS WEATHER OUTLOOK
NATIONAL WEATHER SERVICE NEW ORLEANS LA
1104 AM CST MON NOV 24 2014

GMZ530-532-534-536-538-550-552-555-557-570-572-575-577-LAZ034>037-039-040-046>050-056>072-MSZ068>071-077-080>082-250515-
LAKE PONTCHARTRAIN AND LAKE MAUREPAS-MISSISSIPPI SOUND-
LAKE BORGNE-CHANDELEUR SOUND-BRETON SOUND-

COASTAL WATERS FROM PORT FOURCHON TO LOWER ATCHAFALAYA RIVER OUT 20 NM-
COASTAL WATERS FROM THE SOUTHWEST PASS OF THE MISSISSIPPI RIVER TO PORT FOURCHON OUT 20 NM-
COASTAL WATERS FROM BOOTHVILLE LA TO THE SOUTHWEST PASS OF THE MISSISSIPPI RIVER OUT 20 NM-
COASTAL WATERS FROM PASCAGOULA MS TO STAKE ISLAND LA OUT 20 NM-
COASTAL WATERS FROM PORT FOURCHON TO LOWER ATCHAFALAYA RIVER FROM 20 TO 60 NM-
COASTAL WATERS FROM THE SOUTHWEST PASS OF THE MISSISSIPPI RIVER TO PORT FOURCHON FROM 20 TO 60 NM-
COASTAL WATERS FROM STAKE ISLAND LA TO THE SOUTHWEST PASS OF THE MISSISSIPPI RIVER FROM 20 TO 60 NM-
COASTAL WATERS FROM PASCAGOULA MS TO STAKE ISLAND LA FROM 20 TO 60 NM-POINTE COUPEE-WEST FELICIANA-EAST FELICIANA-ST. HELENA-WASHINGTON-ST. TAMMANY-IBERVILLE-WEST BATON ROUGE-EAST BATON ROUGE-ASCENSION-LIVINGSTON-ASSUMPTION-ST. JAMES-ST. JOHN THE BAPTIST-UPPER LAFOURCHE-ST. CHARLES-UPPER JEFFERSON-ORLEANS-UPPER PLAQUEMINES-UPPER ST. BERNARD-UPPER TERREBONNE-LOWER TERREBONNE-LOWER LAFOURCHE-LOWER JEFFERSON-LOWER PLAQUEMINES-LOWER ST. BERNARD-NORTHERN TANGIPAHOA-SOUTHERN TANGIPAHOA-WILKINSON-AMITE-PIKE-WALTHALL-PEARL RIVER-HANCOCK-HARRISON-JACKSON-
504 AM CST MON NOV10 2014

THIS HAZARDOUS WEATHER OUTLOOK IS FOR PORTIONS OF SOUTHEAST LOUISIANA...SOUTH MISSISSIPPI AND THE ADJACENT COASTAL WATERS.

.DAY ONE...THIS AFTERNOON AND TONIGHT

A LONG DURATION PERIOD OF VERY LOW RELATIVE HUMIDITY AND GUSTY SOUTHWEST WINDS WILL BRING A WILDFIRE RISK TO SOUTHEAST MISSISSIPPI AND PORTIONS OF SOUTHWEST AND SOUTH CENTRAL ALABAMA THIS AFTERNOON.

..DAYS TWO THROUGH SEVEN...TUESDAY THROUGH SUNDAY

SMALL CRAFT ADVISORY CONDITIONS WILL LIKELY CONTINUE THROUGH THE DAY TUESDAY AND INTO TUESDAY NIGHT. WINDS SHOULD EASE SHORTLY

AFTER SUNRISE WEDNESDAY.

.SPOTTER INFORMATION STATEMENT...

THE ACTIVATION OF STORM SPOTTERS...AND EMERGENCY MANAGEMENT PERSONNEL IN SUPPORT OF SEVERE WEATHER OPERATIONS IS NOT EXPECTED THROUGH SUNDAY.

$$

WFO Mobile:

HAZARDOUS WEATHER OUTLOOK
NATIONAL WEATHER SERVICE MOBILE AL
606 AM CST SAT JAN 18 2014

ALZ051>064-FLZ001>006-MSZ067-075-076-078-079-191215-
CHOCTAW-WASHINGTON-CLARKE-WILCOX-MONROE-CONECUH-BUTLER-CRENSHAW-
ESCAMBIA-COVINGTON-UPPER MOBILE-UPPER BALDWIN-LOWER MOBILE-
LOWER BALDWIN-INLAND ESCAMBIA-COASTAL ESCAMBIA-INLAND SANTA ROSA-
COASTAL SANTA ROSA-INLAND OKALOOSA-COASTAL OKALOOSA-WAYNE-PERRY-
GREENE-STONE-GEORGE-
606 AM CST SAT JAN 18 2014

THIS HAZARDOUS WEATHER OUTLOOK IS FOR PORTIONS OF SOUTH CENTRAL ALABAMA...SOUTHWEST ALABAMA...NORTHWEST FLORIDA AND SOUTHEAST MISSISSIPPI.

.DAY ONE...TODAY AND TONIGHT

A LONG DURATION PERIOD OF VERY LOW RELATIVE HUMIDITY AND GUSTY SOUTHWEST WINDS WILL BRING A WILDFIRE RISK TO SOUTHEAST MISSISSIPPI AND PORTIONS OF SOUTHWEST AND SOUTH CENTRAL ALABAMA THIS AFTERNOON.

.DAYS TWO THROUGH SEVEN...SUNDAY THROUGH FRIDAY

NO HAZARDOUS WEATHER IS EXPECTED AT THIS TIME.

.SPOTTER INFORMATION STATEMENT...

ACTIVATION OF SKYWARN SEVERE STORM SPOTTER NETWORKS IS NOT
EXPECTED THROUGH FRIDAY.

$$

GMZ630>635-650-655-670-675-191215-
NORTHERN MOBILE BAY-SOUTHERN MOBILE BAY-MISSISSIPPI SOUND-
PERDIDO BAY-PENSACOLA BAY SYSTEM-CHOCTAWHATCHEE BAY-
COASTAL WATERS FROM PENSACOLA FL TO PASCAGOULA MS OUT 20 NM-
COASTAL WATERS FROM DESTIN TO PENSACOLA FL OUT 20 NM-
WATERS FROM PENSACOLA FL TO PASCAGOULA MS FROM 20 TO 60 NM-
WATERS FROM DESTIN TO PENSACOLA FL FROM 20 TO 60 NM-
606 AM CST SAT JAN 18 2014

THIS HAZARDOUS WEATHER OUTLOOK IS FOR PORTIONS OF THE COASTAL
WATERS OF ALABAMA AND NORTHWEST FLORIDA.

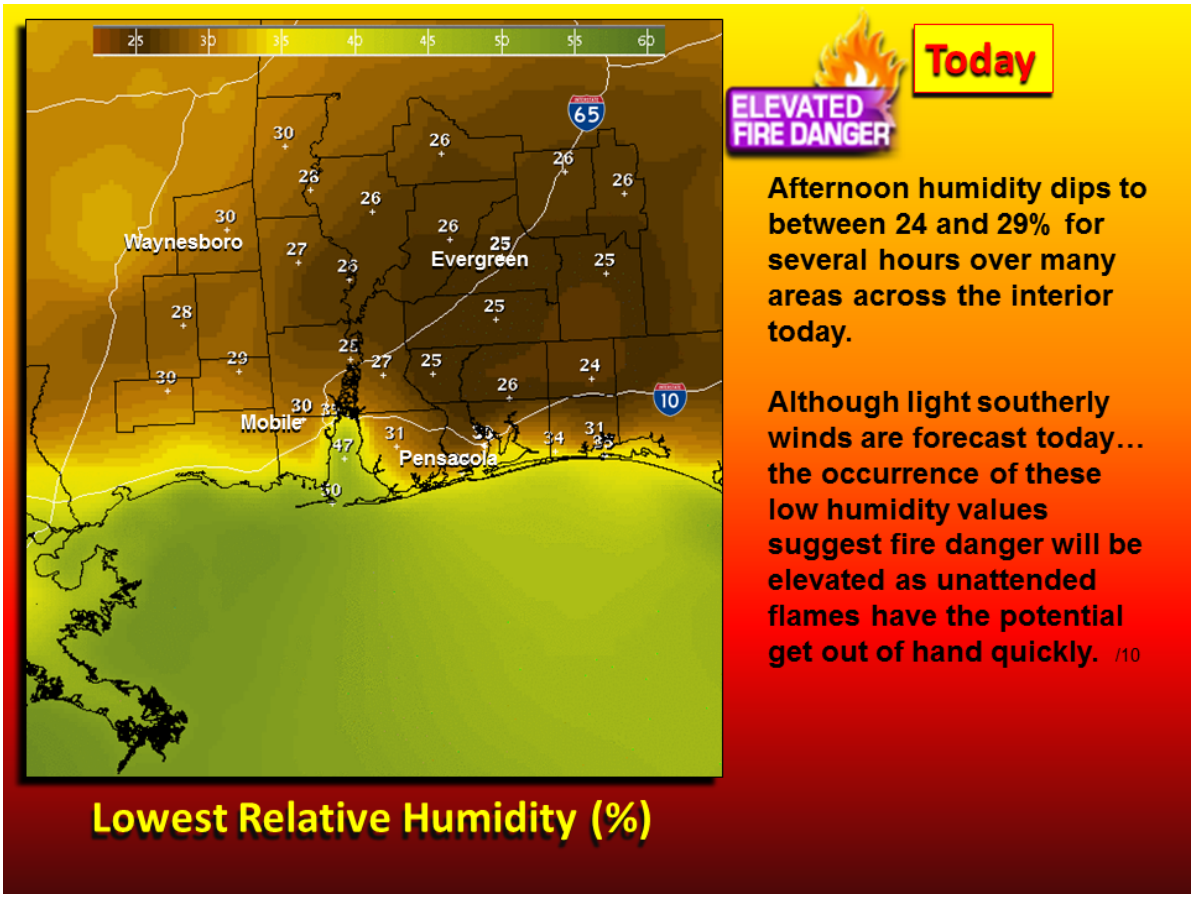
.DAY ONE...TODAY AND TONIGHT

SMALL CRAFT ADVISORY REMAINS IN EFFECT UNTIL 9 AM CST THIS MORNING.
ANOTHER SMALL CRAFT ADVISORY WILL BE IN EFFECT FROM MIDNIGHT TONIGHT
TO NOON CST SUNDAY. A MODERATE TO STRONG NORTHWESTERLY FLOW WILL
SPREAD ACROSS THE AREA THROUGH EARLY THIS MORNING FOLLOWING THE
PASSAGE OF A COLD FRONT...FOLLOWED BY A LULL TODAY. WIND INCREASING
AGAIN THIS EVENING EXCEEDING 20 KNOTS BY MIDNIGHT TONIGHT. SEAS 4 TO
6 FEET...DECREASING TO 2 TO 3 FEET AND INCREASING AGAIN TO 6 TO 8
FEET AROUND MIDNIGHT TONIGHT.

.DAYS TWO THROUGH SEVEN...SUNDAY THROUGH FRIDAY

SMALL CRAFT ADVISORY WILL BE IN EFFECT UNTIL NOON CST SUNDAY. WIND
EXCEEDING 20 KNOTS. SEAS 6 TO 8 FEET UNTIL AROUND NOON SUNDAY.
HAZARDOUS CONDITIONS FOR SMALL CRAFT POSSIBLE TUESDAY THROUGH
WEDNESDAY...AND POSSIBLY FRIDAY.

$$



Appendix X Spot Forecast Examples

WFO Specific
WFO Memphis

SPOT FORECAST FOR C-161 17 18 TIPPAH LAKE...USFS
NATIONAL WEATHER SERVICE MEMPHIS TN

613 AM CDT THU APR 17 2014

FORECAST IS BASED ON IGNITION TIME OF 1000 CDT ON APRIL 17.
IF CONDITIONS BECOME UNREPRESENTATIVE...CONTACT THE NATIONAL WEATHER
SERVICE.

.DISCUSSION...

HIGH PRESSURE WILL REMAIN IN CONTROL TODAY. TEMPERATURES WILL BE WARMER THOUGH STILL BELOW NORMAL FOR THIS TIME OF YEAR WITH HIGHS IN THE UPPER 60S.
A WEAK UPPER LEVEL DISTURBANCE MAY BRING A FEW SHOWERS TO THE REGION TONIGHT INTO EARLY FRIDAY. TEMPERATURES WILL BE NEAR NORMAL.

.TODAY...

MAX TEMPERATURE.....AROUND 68.
MIN HUMIDITY.....41 PERCENT.

TIME (CDT)	*10 AM*	*NOON*	*2 PM*	*4 PM*
CLOUD COVER.....	*MCLEAR*	*MCLEAR*	*PCLDY*	*PCLDY*
PRECIP CHC (%)..	*0*	*0*	*0*	*0*
PRECIP TYPE.....	*NONE*	*NONE*	*NONE*	*NONE*
WEATHER COV.....				
TEMPERATURE.....	*49*	*57*	*63*	*67*
DEWPOINT.....	*41*	*42*	*42*	*43*

RH (%).....	*74*	*58*	*46*	*42*
20FT WIND MPH...	*SE 9*	*SE 8*	*SE 7*	*SE 8*
20FT WIND GUST..	*12*	*11*	*9*	*11*
MIXHGT M AGL....	*939*	*1205*	*1328*	*1364*
MIXHGT FT AGL…	*3081*	*3956*	*4359*	*4477*
MIXHGT M MSL....	*1115*	*1395*	*1511*	*1547*

MIXHGT FT MSL… 3659 4577 4959 5077
TRANS WND M/S… S 7 SE 6 SE 4 SE 4
TRANS WND MPH...S 15 SE 13 SE 9 SE 9
CATEGORY DAY.... 3 3 3 3

.TONIGHT...

MIN TEMPERATURE.....AROUND 50.
MAX HUMIDITY.....82 PERCENT.

TIME (CDT) 6 PM 8 PM 10 PM MIDNGT 2 AM 4 AM
CLOUD COVER..... PCLDY MCLDY MCLDY MCLDY MCLDY CLDY
PRECIP CHC (%).. 20 20 20 20 20 20
PRECIP TYPE.....NONE RNSHWR RNSHWR RNSHWR RNSHWR RNSHWR
WEATHER COV..... S CHC S CHC S CHC S CHC S CHC
TEMPERATURE.....66 59 52 51 51 51
DEWPOINT..... 43 44 45 45 45 45
RH (%)..... 44 58 77 82 81 80
20FT WIND MPH...SE 6 SE 5 E 3 SE 3 E 3 NE 2
20FT WIND GUST..8 7 4 4 4 2

MIXHGT M AGL....1297 1276 1187 483 114 204
MIXHGT FT AGL...4258 4189 3895 1586 375 672
MIXHGT M MSL....1480 1459 1365 660 294 387
MIXHGT FT MSL...4858 4789 4480 2166 967 1272
TRANS WND M/S...SE 4 SE 4 SE 4 SE 5 SE 4 S 2
TRANS WND MPH...SE 10 SE 10 SE 10 SE 12 SE 9 S 5
CATEGORY DAY....3 3 3 2 1 1

WFO Jackson:

SPOT FORECAST FOR HOMOCHITTO BB 30...USFS
NATIONAL WEATHER SERVICE JACKSON MS
700 AM CDT THU APR 17 2014

FORECAST IS BASED ON IGNITION TIME OF 1100 CDT ON APRIL 17.
IF CONDITIONS BECOME UNREPRESENTATIVE...CONTACT THE NATIONAL WEATHER SERVICE.

.DISCUSSION...CLOUDY CONDITIONS EARLY THIS MORNING AT THE BURN SITE BUT CLOUDS WILL SLOWLY BREAK UP BY IGNITION TIME AS INCREASED MIXING OCCURS. 20 FT AND SURFACE WINDS WILL PICK UP FROM THE EAST AND SOUTHEAST RESPECTIVELY. RELATIVE HUMIDITY VALUES WILL STAY ELEVATED THROUGH THE AFTERNOON WITH FEW FIRE WEATHER CONCERNS EXPECTED. HOWEVER...SOME PATCHY FOG COULD BE POSSIBLE NEAR THE DAWN HOURS FRIDAY. NO DENSE FOG IS EXPECTED AT THIS TIME FOR THE BURN SITE.

.TODAY...

TIME (CDT)	11 AM	1 PM	3 PM	5 PM
SKY (%).....	PCLDY	PCLDY	PCLDY	PCLDY
WEATHER COV.....				
WEATHER TYPE....	NONE	NONE	NONE	NONE
TEMP.....	.60	64	67	68
RH.....	66	58	55	56
20 FT WIND DIR.	.E	E	E	E
20 FT WIND SPD..	7	7	7	6
20 FT WIND GUST.	9	9	10	8

MIX HGT (FT)....	3200	4200	5000	4800
MIX HGT (M).....	980	1280	1520	1460
TRANSPORT WIND..	SE 13	SE 12	SE 14	SE 14
TRAN WIND (M/S).	SE 6	SE 5	SE 6	SE 6
MAX FIRE DANGER	2	3	4	3

.TONIGHT...

TIME (CDT)	6 PM	8 PM	10 PM	MIDNGT	2 AM	4 AM

SKY (%).....	.PCLDY	MCLDY	MCLDY	MCLDY	MCLDY	MCLDY
WEATHER COV.....		S CHC	S CHC	S CHC	CHANCE	CHANCE
WEATHER TYPE....	NONE	RNSHWR	RNSHWR	RNSHWR	RNSHWR	RNSHWR
TEMP.....	67	64	59	58	57	56
RH.....	58	65	77	83	86	89
20 FT WIND DIR..	E	SE	SE	E	E	NE
20 FT WIND SPD..	5	3	3	2	3	3
20 FT WIND GUST.	7	6	6	3		6
MIX HGT (FT)....	4300	2800	1200	600	600	800
MIX HGT (M).....	1310	850	370	180	180	240
TRANSPORT WIND..	SE 13	SE 8	E 6	E 7	E 7	E 6
TRAN WIND (M/S).	SE 6	SE 4	E 3	E 3	E 3	E 3

WFO New Orleans:

SPOT FORECAST FOR DESOTO 1462...U.S. FOREST SERVICE
NATIONAL WEATHER SERVICE NEW ORLEANS LA
707 AM CDT THU APR 17 2014

IF CONDITIONS BECOME UNREPRESENTATIVE...CONTACT THE NATIONAL WEATHER SERVICE.

.DISCUSSION...A SURFACE LOW WILL MOVE THROUGH THE NORTHERN GULF OF MEXICO TONIGHT...BRINGING SCATTERED TO NUMEROUS SHOWERS TO THE AREA. HIGH PRESSURE WILL BUILD IN AGAIN FRIDAY AND REMAIN IN PLACE THROUGH MONDAY. ANOTHER SHORT WAVE WILL BRING ISOLATED TO SCATTERED SHOWERS AND THUNDERSTORMS TO THE AREA TUESDAY BEFORE HIGH PRESSURE BUILDS IN AGAIN ON WEDNESDAY.

REMARKS...NO SIGNIFICANT FOG DEVELOPMENT IS EXPECTED TONIGHT OR FRIDAY MORNING. WINDS TODAY SHOULD BE GENERALLY EASTERLY.

.TODAY...

TIME (CDT)	10A	11A	12P	1PM	2PM	3PM	4PM	5PM
SKY (%).....	75	74	74	74	76	79	82	85
WEATHER COV.....							SCH	SCH
WEATHER TYPE....							RW	RW
TEMP.....	60	62	64	65	67	69	69	67

RH.....	75	72	70	70	68	63	63	68
DEWPOINT.....	52	53	54	55	56	56	56	56
20 FT WIND DIR..	E	E	E	E	E	E	E	E
20 FT WIND SPD..	6	7	7	7	7	7	7	7
20 FT WIND GUST.	10	15	15	15	15	15	15	15
MIX HGT (KFT)...	2.1	2.1	2.1	3.6	3.6	3.6	3.8	3.8
MIX HGT (KM)....	0.6	0.6	0.6	1.1	1.1	1.1	1.2	1.2
TRANSP WIND DIR .	ESE	ESE	ESE	ESE	ESE	ESE	E	E
TRANSP WIND SPD.	17	17	17	16	16	16	17	17
TRANS SPD (M/S).	8	8	8	7	7	7	8	8
DISPERSION.....	35	35	35	42	42	42	47	47
LVORI.....	3	3	3	3	1	1	1	1
CHC OF PCPN (%).	10	10	10	10	10	10	20	20

.TONIGHT...

TIME (CDT)	6 PM	8 PM	10 PM	MIDNGT	2 AM	4 AM
SKY (%).....	88	89	90	92	91	86
WEATHER COV.....	S CHC	S CHC	CHANCE	CHANCE	CHANCE	CHANCE
WEATHER TYPE....	RNSHWR	RNSHWR	RNSHWR	RNSHWR	RNSHWR	RNSHWR
TEMP.....	66	64	63	62	61	59
RH.....	70	75	81	84	87	90
DEWPOINT.....	56	56	57	57	57	56
20 FT WIND.....	E 6	E 6	E 5	E 5	ENE 5	ENE 5
20 FT WIND GUST.	10	10	10	10	10	10
MIX HGT (FT)....	3800	1700	1600	1600	1500	1500
MIX HGT (M).....	1160	520	490	490	460	460
TRANSPORT WIND..	E 17	E 22	E 24	E 24	E 28	ENE 29

TRAN WIND (M/S).	E 8	E 10	E 11	E 11	E 13	ENE 13
DISPERSION.....	47	24	27	16	19	19
LVORI.....	3	3	3	4	4	4
CHC OF PCPN (%).	20	20	30	30	50	50

WFO Mobile:

SPOT FORECAST FOR DE SOTO 14529...USFS
NATIONAL WEATHER SERVICE MOBILE AL

715 AM CDT WED MAR 19 2014

FORECAST IS BASED ON IGNITION TIME OF 1100 CDT ON MARCH 19. IF CONDITIONS BECOME UNREPRESENTATIVE...CONTACT THE NATIONAL WEATHER SERVICE.

.DISCUSSION...HIGH PRESSURE RIDGE ACROSS THE SOUTHEAST STATES AND NORTHEAST GULF OF MEXICO WILL SHIFT SOUTHEAST TODAY AS A COLD FRONT APPROACHES FROM THE NORTHWEST. THIS FRONT WILL THEN PASS THROUGH THE BURN AREA AROUND MIDNIGHT...WITH WINDS SHIFTING TO THE NORTH. LOWEST AFTERNOON RELATIVE HUMIDITY VALUES WILL REACH NEAR 42 PERCENT...WITH AN AFTERNOON DISPERSION NEAR 40.

FOG POTENTIAL AND OTHER REMARKS...PATCHY FOG WILL DEVELOP AROUND MIDNIGHT JUST AHEAD OF THE FRONT WITH VISIBILITIES ONLY DROPPING TO AROUND 5 MILES. NO FOG AFTER THE FRONT THROUGH THURSDAY.

.TODAY...

SKY/WEATHER.....SUNNY (0-5 PERCENT) THEN BECOMING MOSTLY SUNNY (40-50 PERCENT).
MAX TEMPERATURE.....AROUND 76.
MIN HUMIDITY.....42 PERCENT.
WIND (20 FT).....WEST-SOUTHWEST AROUND 5 MPH.
MIXING HEIGHT.....INCREASING 4000 FT AGL.
MIXING WINDS.....SOUTHWEST AROUND 8 MPH BECOMING WEST IN THE AFTERNOON.
DISPERSION INDEX.....INCREASING TO 39.
LVORI.....DECREASING TO 1.
STABILITY CLASS.....B.

TIME (CDT)	11 AM	1 PM	3 PM	5 PM
SKY (%)	46	38	38	38

WEATHER COV				
WEATHER TYPE	NONE	NONE	NONE	NONE
TEMP	64	72	75	74
RH	63	46	42	44
20 FT WIND DIR	W	WSW	WSW	W
20 FT WIND SPD	4	5	5	5
20 FT WIND GUST				
MIX HGT (FT)	2000	3900	3900	4000
MIX HGT (M)	610	1190	1190	1220
TRANSP WIND DIR	SW	W	W	W
TRANSP WIND SPD	8	8	8	8
TRANS SPD (M/S)	4	4	4	4

DISPERSION.....22 39 39 38
LVORI.....2 1 1 1
STABILITY CLASS…....B B B B
CWR.....10 10 10 10

.TONIGHT...

SKY/WEATHER.....PARTLY CLOUDY (40-50 PERCENT).
MIN TEMPERATURE.....AROUND 48.
MAX HUMIDITY.....85 PERCENT.
WIND (20 FT).....WEST AROUND 5 MPH BECOMING NORTH.
MIXING HEIGHT.....DECREASING TO 200 FT AGL.
MIXING WINDS.....WEST AROUND 8 MPH BECOMING NORTH.
DISPERSION INDEX.....DECREASING TO 5.
LVORI.....1 INCREASING TO 4 IN THE LATE EVENING...THEN
DECREASING TO 3 LATE TONIGHT.
STABILITY CLASS.....B BECOMING F.

TIME (CDT)	6 PM	8 PM	10 PM	MIDNGT	2 AM	4 AM
SKY (%)	38	49	49	49	47	47
WEATHER COV						
WEATHER TYPE	NONE	NONE	NONE	NONE	NONE	NONE
TEMP	72	67	60	56	53	51
RH	48	59	74	81	83	73
20 FT WIND DIR	W	WNW	NW	NW	N	N
20 FT WIND SPD	5	4	4	4	5	5
20 FT WIND GUST						
MIX HGT (FT)	4000	200	200	200	200	300

MIX HGT (M)	1220	60	60	60	60	90
TRANSP WIND DIR	W	WNW	NW	NW	N	N
TRANSP WIND SPD	8	7	7	7	7	8
TRANS SPD (M/S)	4	3	3	3	3	4
DISPERSION	38	4	4	4	5	5
LVORI	1	3	4	4	4	3
STABILITY CLASS	B	F	F	F	F	F
CWR	10	0	0	0	0	0

.THURSDAY...

SKY/WEATHER.....SUNNY (20-30 PERCENT).

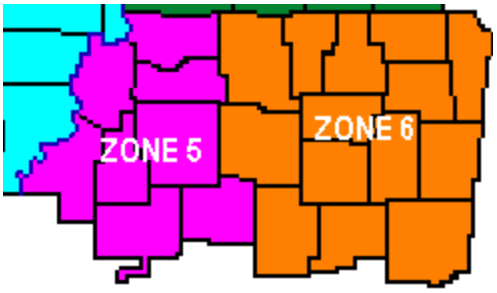
MAX TEMPERATURE.....AROUND 73.
MIN HUMIDITY.....29 PERCENT.
WIND (20 FT).....NORTH WINDS 5 MPH BECOMING NORTHEAST IN THE AFTERNOON.
MIXING HEIGHT.....300 FT AGL INCREASING TO 4100 FT AGL.
MIXING WINDS.....NORTH AROUND 8 MPH SHIFTING TO THE NORTHEAST IN THE LATE MORNING AND EARLY AFTERNOON 10 TO 13 MPH.
DISPERSION INDEX.....5 INCREASING TO 49.
LVORI.....3 DECREASING TO 1 IN THE LATE MORNING AND AFTERNOON.
STABILITY CLASS.....F BECOMING B.

TIME (CDT)	6 AM	8 AM	10 AM	NOON	2 PM	4 PM
SKY (%)	47	14	14	14	2	2
WEATHER COV						
WEATHER TYPE	NONE	NONE	NONE	NONE	NONE	NONE
TEMP	49	50	58	66	71	73
RH	71	64	49	37	31	29
20 FT WIND DIR	N	N	NNE	NNE	NNE	NNE
20 FT WIND SPD	5	5	5	5	5	4
20 FT WIND GUST						
MIX HGT (FT)	300	300	2100	2100	3900	4100
MIX HGT (M)	90	90	640	640	1190	1250
TRANSP WIND DIR	N	N	NE	NE	NE	NE
TRANSP WIND SPD	8	8	13	13	10	7
TRANS SPD (M/S)	4	4	6	6	4	3
DISPERSION	5	9	34	34	49	34
LVORI	3	3	1	1	1	1
STABILITY CLASS	F	B	B	B	B	B
CWR	0	0	0	0	0	0

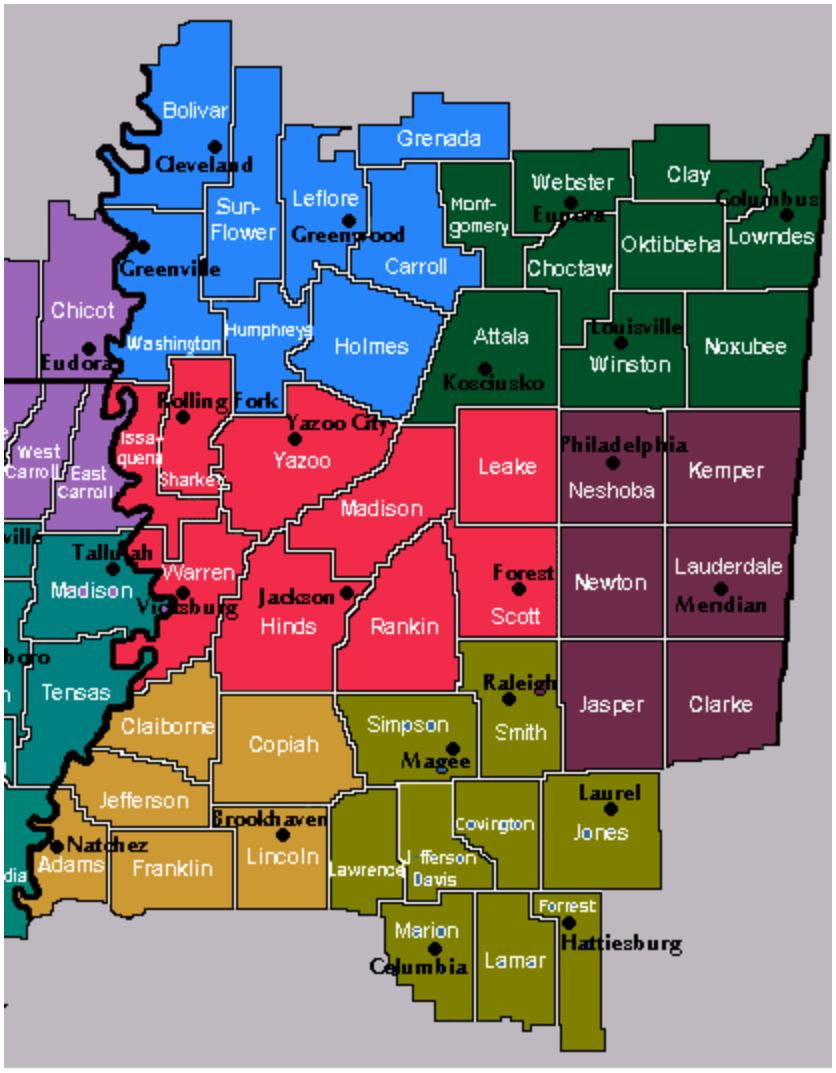
Appendix XI Fire Weather State Zone Configurations

WFO Specific

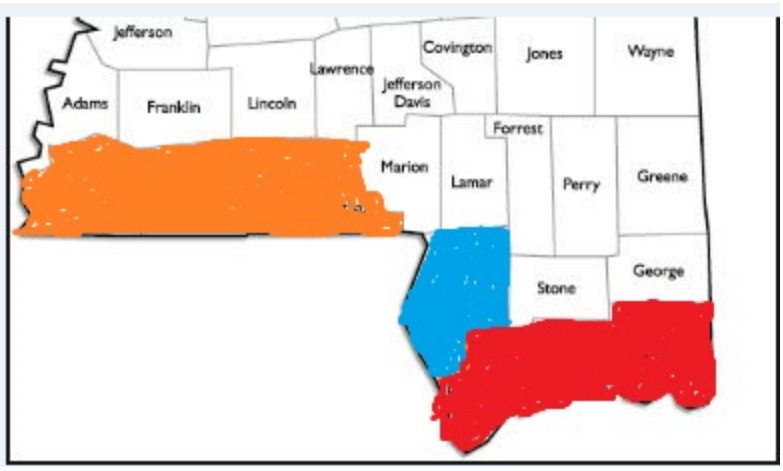
WFO Memphis:



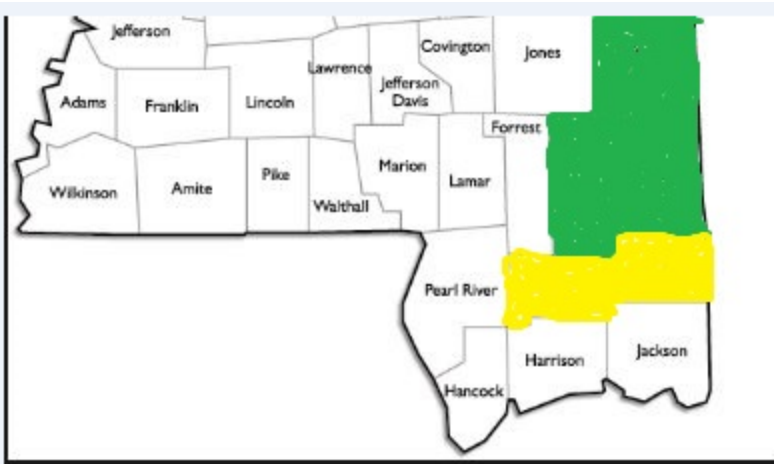
WFO Jackson:



WFO New Orleans:


Jefferson
Adams
Franklin
Lincoln
Lawrence
Jefferson Davis
Covington
Jones
Wayne
Forrest
Marion
Lamar
Perry
Greene
Stone
George

WFO Mobile:


Jefferson
Adams
Franklin
Lincoln
Lawrence
Jefferson Davis
Covington
Jones
Forrest
Wilkinson
Amite
Pike
Walthall
Marion
Lamar
Pearl River
Harrison
Jackson
Hancock